Owner's Manual

English

F5 Corpus

CE

Dear Permobil Owner

We congratulate you on your choice of power wheelchair. Our goal is for you to continue to feel satisfied with your choice of both vendor and wheelchair. Your Permobil is designed to give you highest possible comfort and safety and to meet the requirements regarding safety and environment.

Before you begin using your wheelchair, it is important that you read and understand the content of these operating instructions and in particular the Safety Instructions.

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IMPORTANT INFORMATION ABOUT THIS OWNER’S MANUAL

Before you begin using your wheelchair, it is important that you read and understand the content of these operating instructions and in particular the Safety Instructions.

These operating instructions are primarily intended to acquaint you with the functions and characteristics of the wheelchair and how you can use them in the best manner possible. They also contain important safety and maintenance information, as well as describing possible problems that can arise while driving the wheelchair.

Always keep these operating instructions handy in connection with your wheelchair, since the need for important information can arise concerning its use, safety and maintenance.

It is also possible to obtain information concerning our products from our home page on the Internet. You can find us at www.permobil.com.

All information, pictures, illustrations and specifications are based upon the product information that was available at the time that these operating instructions were printed. Pictures and illustrations that are found in these operating instructions are representative examples and not intended to be exact depictions of the various parts of the wheelchair.

We reserve the right to make changes to the product without prior notice.

If you are visually impaired, this document can be viewed in PDF format at www.permobil.com or alternatively ordered in large text.

Technical support

In the event of technical problems, you should contact Permobil.

Always state the seats serial number when contacting Permobil to ensure that the correct information is provided.

Spare parts & accessories

Spare parts and accessories must be ordered through Permobil. The expected service life of this product is 7 years.

Scrapping

Contact Permobil for information about scrapping agreements in force.

Warranty

All wheelchairs are supplied with a two-year product guarantee. Batteries and charger are supplied with one year warranty.

Incident reporting

If an incident occurs please contact your nearest Permobil representative. Normally the same person you contacted at purchase day. To prepare this contact there is a link on our homepage, on the internet, at www.permobil.com. Open up your country page and the contact page. Here is the needed contact information and a guidance document in what information we need to investigate the incident. Complete the information as much as possible. This is of great help for us.

To increase the product quality and to ensure that our product is safe through the whole life cycle we need you to send in Incident Reports. It is also stated in MEDDEV 2.12-1 and Annex 9 that the manufacturer shall *“Encourage users or those given specific responsi-bility for reporting incidents that have occurred with medical devices and that meet the criteria within these guidelines to report the incidents to the Manufacturer and or to the Competent Authority in accordance with national guidance”.*

To meet the requirements and to ensure that our products shall remain safe in your hands we need your assistance. We hope you never need to use the information on this page but if there is an incident please contact us.

Product approval

This product fulfil the requirements according to EN 12184, EN 1021-1, EN 1021-2, ISO 7176-9:2009, ISO 7176–14:2008, ISO 7176-16:1997 and ISO 7176-19:2001.

SAFETY INSTRUCTIONS

General

An electric wheelchair is a motorized vehicle and special care must therefore be taken when it is used. Please read and follow all instructions and warnings in this manual before operating your Permobil powered wheelchair. Incorrect use may both injure the user and damage the chair. In order to reduce these risks, you should read the Owner's Manual carefully, in particular the safety instructions and their warning texts.

Permobil is not responsible for personal injuries or property damage resulting from any person's failure to follow the warnings and instructions in this manual. Permobil is not responsible for injuries or damage resulting from failure to exercise good judgment.

The final selection and purchasing decision about the type of electric wheelchair to be used is the responsibility of the wheelchair user and his or her healthcare professional. Permobil is not responsible for inappropriate selections of wheelchair models or features or improper fitting of the wheelchair.

Attension!

Throughout this manual the following symbol will be used to note items that have significant importance to safety concerns:

⚠ WARNING!

Please use extreme caution where this warning symbol appears. Failure to observe warnings can lead to personal injury and property damage, including damage to the wheelchair.

⚠ CAUTION!

Please use caution where this symbol appears.

Your wheelchair and seat was configured specifically for your needs as prescribed by your healthcare provider. Consult your healthcare provider before changing the seat position or making any other adjustment. Some adjustments may reduce your wheelchair's performance or safety or may not be appropriate for your needs.

It is also of the utmost importance that you devote sufficient time to become acquainted with the different buttons, the function and steering controls, the different adjustment possibilities of the seat, etc. of your wheelchair and its accessories before you begin using it.

Do not undertake your own first test drive without making sure that you have assistance in the immediate vicinity if you should need help.

Prepare for use

In order to make sure that nothing happened to the wheelchair while it was being shipped to you, you should check the following items before beginning to use it:

- that all products ordered are included in the delivery, including operating instructions and possible other documentation. If you suspect that something is missing, then contact your supplier or Permobil for more information as soon as possible.
- that no transport-related or other damages have occurred to the wheelchair, seat and its accessories. If you discover that something has been damaged or in some other manner appears to be incorrect, then contact your supplier or Permobil for more information as soon as possible before you continue the checks.

We recommend that you charge your wheelchair's batteries before you begin using it. The chapter titled "Charging the Batteries" describes how to do this.

Always be sure that tires are inflated properly before driving.

If you experience that the wheelchair in any manner is not behaving as expected or if you suspect that something is wrong: abort the test drive as soon as possible, shut off the wheelchair and get in touch with your service contact or Permobil for more information.

Warnings and precautions

⚠ CAUTION!

Operation
Permobil recommends the use of wheelchair lights at all times user is riding near public rights of way. Use extreme caution when driving near unprotected ledges, drop-offs or on elevated surfaces. Unintended movement or excessive speed in these areas can lead to personal injury or property damage.

⚠ CAUTION!

Operation
Do not drive the wheelchair over any curbs or edges higher than indicated in the technical specifications section of the manual. When driving over a curb or similarly elevated surface, you must cross the surface at a 90 degree angle (perpendicular). Crossing such surfaces at any other angle may result in the wheelchair tipping.
Reduce your speed when driving on uneven terrain or soft surfaces. Do not use your wheelchair on stairs or escalators. Always use an elevator.
Do not lift or move the wheelchair by any of its removable parts. Doing so could lead to personal injury and property damage, including damage to the wheelchair.

⚠ CAUTION!

Operation
Do not use the wheelchair to pull any kind of objects and never hang excessive weights on the backrest. Doing so could lead to personal injury and property damage, including damage to the wheelchair.
If you by accident impact with walls - doors, or other fixed objects when operating the wheelchair, always make sure all parts of the wheelchair are undamaged before operating the wheelchair again. Not doing so could lead to personal injury.

⚠ CAUTION!

Operation
Do not let children drive the wheelchair without supervision. Do not drive the wheelchair on public streets or roadways. Obey all local pedestrian rules and be aware that vehicle drivers may have difficulty seeing you.
Do not operate your wheelchair under the influence of alcohol. Consumption of alcohol may impair your ability to operate your wheelchair safely.
Some physical limitations or use of medication, either prescribed or over-the-counter, may limit your ability to operate your wheelchair safely. Be sure to consult with your physician about your physical limitations and medications.

⚠ WARNING!

Modifications
Any unauthorized modifications to the wheelchair or its various systems may increase the risk of personal injury and property damage, including damage to the wheelchair.
All modifications to and interventions in the vital systems of the wheelchair must be performed by a qualified service technician authorized by Permobil to perform such service on Permobil products.

⚠ WARNING!

Weight Limitations
The maximum user weight for your Permobil is set forth in the specification section in this Owner's Manual for current seat model. Operation of the wheelchair by users who exceed the maximum allowable user weight can lead to personal injury and property damage, including damage to the wheelchair, as well as voiding any applicable warranty to the wheelchair.
Do not carry passengers on the wheelchair. Doing so can lead to personal injury and property damage, including damage to the wheelchair.

⚠ CAUTION!

Prior to Riding
In some instances, including where certain medical conditions exist, users should practice operating their wheelchair under the supervision of an assistant who is familiar with the operation of the wheelchair and with the abilities and limitations of the user.

⚠ CAUTION!

Operation - Inclines
When driving downhill, select the slowest speed and proceed with caution. Driving down an incline can shift the user’s center of gravity forward. If the wheelchair rolls faster than you would like, stop the wheelchair by releasing the joystick and begin descending again at a slower speed.
Avoid sudden stops or starts. Stop by releasing joystick rather than by turning the power off. Turning off power while the wheelchair is in motion will cause the wheelchair to stop suddenly. Be sure to keep all recommended positioning belts securely fastened at all times.
When driving up an incline, try to keep moving at a steady speed. Stopping and starting the chair while moving up an incline makes the wheelchair more difficult to control.
Do not drive up or down slopes with a gradient greater than indicated in the technical specifications section of the manual. There is a risk that the wheelchair will not maneuver safely.

⚠ WARNING!

Operation - Inclines
Do not drive the wheelchair where the sideways gradient is more than indicated in the technical specifications section of the manual. There is a risk of tipping over.
Do not drive up or down ramps that are not equipped with proper edge protection along the sides of the ramp to prevent the wheelchair from falling off of the ramp.
When driving up an incline, be sure to drive your wheelchair straight up the incline (perpendicular). Driving at an angle up an incline increases the risk of tipping or falling. Use extreme caution when driving up an incline.
Do not drive down or up a hazardous incline, such as a surface covered with snow, ice, or wet leaves or a surface that is uneven. Also avoid driving on ramps that do not have proper edge protection.

⚠ WARNING!

Operation - Turning
Turning your wheelchair at high speeds can create the possibility of the wheelchair tipping and personal injury. The possibility of tipping can be increased by high turning speed, sharp turns, uneven surfaces, abrupt changes in direction, and driving from an area of low traction (e.g. lawn) to an area of high traction (e.g. sidewalk).
To protect against tipping, personal injury and property damage, reduce speed and reduce the sharpness of your turn when turning.

⚠ WARNING!

Operation - Freewheel Mode
In order to prevent the wheelchair from rolling away, ensure that the wheelchair is on a level surface before releasing the brakes.
In order to avoid personal injury do not use your Permobil in freewheel mode without an attendant present. Do not attempt to put the wheelchair in freewheel mode by yourself while seated in it.
Do not put your Permobil in freewheel mode while on an incline. This could cause the wheelchair to roll on its own, causing injury and property damage, including damage to the wheelchair.

⚠ CAUTION!

Driving on a Loose/Soft Surface
When the wheelchair is set to its lowest speed and the batteries are not fully charged, driving on certain surfaces, for example gravel, sand or thick carpeting, can involve constrained navigability.

⚠ CAUTION!

Driving in Darkness
Driving in the dark may only be done if your wheelchair is equipped with functioning lighting in the front and the back, or as per the applicable national or local traffic regulations.

⚠ WARNING!

Passengers
The wheelchair is not intended to transport passengers, regardless of the age of the passenger. The Maximum User Weight stated in the Owner's Manual for your seating system includes the user and any personal effects. The Maximum limit should not be exceeded. The wheelchair's manoeuvrability and stability can be degraded as a result.

⚠ WARNING!

Driving with Seat Lift/Seat Tilt/ Backrest Recline
Be careful in making sure that nothing gets stuck between the chassis and the seat when the seat lift/seat tilt is operated. Operating the seat lift, seat tilt/ backrest recline changes the center of gravity and increases the risk of tipping over. Always drive in low speed and only use those seat functions on level ground, and not on hills, ramps, slopes or other inclines. Using those seat functions while driving on inclines can lead to personal injury and property damage, including damage to the wheelchair.

⚠ WARNING!

Center of Balance
The possibility of this wheelchair tipping and the point where this wheelchair will tip forward, back or to the side depends on its center of balance. Please note that the following factors can affect the wheelchair's center of balance:

- Elevation of the seat
- Height and angle of the seat
- Body position or weight distribution
- Driving on an incline such as a ramp or a hill
- Use of a backpack or other accessories, depending on the amount of weight added.
- If your wheelchair begins to move in an unexpected manner, immediately release the joystick to stop the wheelchair. Except in an emergency, do NOT use the on/off button to stop your wheelchair, as this will cause the wheelchair to stop abruptly and may cause personal injury.

⚠ WARNING!

Fixed seat post
Adjusting the seat height may only be performed by an authorized service provider. See the service manual for more information.

⚠ CAUTION!

Positioning Belt
Permobil positioning belts are designed to position the user only and will not protect you in an accident. You may even receive further injury from the belts.

⚠ WARNING!

Support Wheels
If your wheelchair is equipped with support wheels, they must always be mounted when the wheelchair is being driven.

⚠ WARNING!

Transfer into and out of the chair
Be sure that the power is turned OFF before entering or leaving the wheelchair and before lifting the control side armrest.
When transferring into or out of the wheelchair, every precaution should be taken to reduce the distance between the wheelchair and the place to which the user is transferring. Overextending this distance can cause user to overexert, lose balance, or fall.
Permobil recommends that users transfer in the presence of or with the assistance of an attendant.
Use caution when bending or reaching.
Never use the joystick as a handhold or point of support.
Do not use foot plates or armrests as supports when transferring into or out of the wheelchair. The footplates and armrests are not designed to be weight-bearing structures. Excessive force may cause them to give way, resulting in personal injury or property damage, including damage to the wheelchair.

⚠ WARNING!

Transport
The wheelchair must only be transported in vehicles approved for this purpose. Always ask for confirmation of the transporter that the vehicle is suitable designed, insured and equipped to transport a person in a wheelchair. A wheelchair is not designed as a car seat and cannot offer the same degree of safety that is offered by standard car seats, no matter how securely it has been fastened in the vehicle concerned.
Carefully check that the wheelchair is properly fixed and that the break release has not been activated (the wheelchair drive wheels must be locked). The wheelchair must only be locked into position with loading straps from the tie-down points at the front and rear, marked with yellow stickers, or by using a Permolock locking system. The wheelchair must not be secured onto any other part of the wheelchair including the seat.
If the wheelchair needs to be transported with the user seated in it, be sure to use an approved attachment system suitable for the total weight of the wheelchair to secure the wheelchair.

- Permobil recommends that the wheelchair be equipped with a headrest and that this is used during transportation.
- During transportation, it is essential that you are secured with a three-point safety belt that is attached to the floor and a side of the vehicle.
- Permobil positioning belts are designed to position the user only and not to protect you in the event of a motor vehicle accident. The positioning belts do not replace use of a vehicle mounted restraint.

⚠ CAUTION!

Driving in Extreme Climate Conditions
Permobil's wheelchairs are designed to withstand most adverse weather conditions, however to minimize the risk of being caught in difficult situations you should avoid using the wheelchair outdoors during, for example, severe cold, heavy rain or thick snow.
Also bear in mind that certain surfaces on the wheelchair can be heated up or cooled down in the event of prolonged exposure to intense sunlight or cold respectively.

⚠ WARNING!

Maintenance and Service
Carry out only the service and maintenance which are stated in the Owner's Manual. All other service and maintenance including programming of the control system must be performed by a qualified service technician authorized by Permobil to perform such service on Permobil products. Incorrect settings could result in unsafe operation of the wheelchair and could cause the chair to become unstable or uncontrollable. Such modifications may also void the wheelchair's warranty.
During all work on the electrical system of the wheelchair, the Main fuse must always be in OFF position. To avoid the risk of electric shock, use extreme caution when using metal objects while working on the batteries. Short-circuiting can easily cause an explosion. Never perform service on the wheelchair without using protective gloves and goggles. Failure to do so can lead to personal injury.
Do not use parts or accessories not authorized by Permobil. Use of unapproved "aftermarket" accessories and parts may cause changes in the wheelchair, which may make the wheelchair unstable or uncontrollable. Such use may also void the warranty on the wheelchair.
Connecting any unapproved electrical or electronic devices to the wheelchair's electrical system can cause damage to the chair and caused the chair to become uncontrollable or drive erratically. Such use may also void the warranty.
The wheelchair is heavy and contains many moving parts, which means that the risk of being caught between them is always present.

⚠ WARNING!

Charging of Batteries
Charging must be done in a well-ventilated room, not in a wardrobe or closet. Charging must not be done in a bathroom or wet room. Only chargers with a max 10 A charging current (average value) may be used (the RMS value of the charging current must not exceed 12 A). When the charger is connected, the chair must not and cannot be driven.

⚠ WARNING!

Changing Batteries and Fuses
The Main fuse must always be in OFF-position when batteries and fuses are replaced.
Observe care in the use of metallic objects when working with batteries. A short-circuit can easily cause an explosion. Always use protective gloves and protective eye-glasses.

⚠ WARNING!

Safety Circuits
Permobil products are equipped with safety circuits. Inhibit circuits prevent the wheelchair from driving under certain conditions. Speed reduction circuits limit the wheelchair's maximum speed under certain conditions. Limit switch circuits limit the wheelchair's functions under certain circumstances. Overload protection circuits shut the wheelchair off in case of an overload. The user should stop using the wheelchair immediately and consult an authorized Permobil distributor if any of these circuits should become disabled.
Any attempt to modify the safety circuits will result in unsafe operation of the wheelchair and could cause the chair to become unstable or uncontrollable. Such modifications may also void the wheelchair's warranty.

⚠ CAUTION!

Recycling of Batteries
Used or broken drive batteries should be taken care of in an environmentally correct manner in accordance with locally applicable recycling directions.

⚠ WARNING!

Filling Air into tires
Check at regular intervals that the wheelchair's tires have the prescribed tire pressure. Incorrect tire pressure can cause deteriorating stability and maneuverability.
The prescribed tire pressure is 200-250 kPa (2-2.5 bar).
Note that overfilling causes a risk of explosion.

⚠ WARNING!

Changing Tires
Avoid the use of sharp-edged tools when working with tires.

⚠ WARNING!

Storage
The wheelchair and its accessories must always be shut off when they are not being used. Always store the wheelchair so that access for unauthorized individuals is avoided.
Never store the wheelchair in a room in which condensation can arise (mist or dampness on the surfaces) e.g. in pool areas, laundry rooms, or similar rooms.
If you are unsure as to how your wheelchair and its accessories should be properly stored, contact your supplier or Permobil for more information.

⚠ WARNING!

Damages/malfunctions on the wheelchair and its accessories
If you experience that the wheelchair in any manner is not behaving as expected or if you suspect that something is wrong: Stop driving as soon as possible, shut off the wheelchair and contact your service contact or Permobil for more information.
It's also of greatest importance that Permobil be informed if the wheelchair and its accessories have been subjected to transport damages, damages during driving or damages due to another cause as soon as possible after the event. There exists a risk that the wheelchair and its accessories can no longer be used in a safe and secure manner.

⚠ CAUTION!

EMC Requirements
The electronics of an power wheelchair can be affected by external electromagnetic fields (for example from mobile telephones). Similarly, the electronics of the wheelchair itself can also emit electromagnetic fields that can affect the immediate surroundings (for example certain alarm systems in businesses).
The limit values for Electromagnetic Compatibility (EMC) with respect to power wheelchairs is set in the harmonized standards for the EU in the Medical Devices Directive, No. 93/42/EEC.
Permobil's electronic wheelchair's comply with these limit values.

DESIGN AND FUNCTION

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General

The Permobil F5 Corpus is an electric front-wheel drive wheelchair for outdoor and indoor driving. It is intended for people with physical disabilities.

The wheelchair consists of a chassis and a seat. The chassis contains the wheelchair's electronics, power supply and drive functions. The seat consists of a seat frame, seat plate/back rest, arm rest/leg rest, seat lift/fixed seat tube and any accessories/options such as a head rest, calf rest, chest support, etc.

1. Back rest
2. Control panel
3. Seat
4. Leg rest
5. Foot plates
6. Drive wheels
7. Caster wheels
8. Chassi
9. Serial number label
10. Arm rest

Figure 1. F5 Corpus.

Shock absorber

The wheelchair is equipped with two shock absorbers.

Adjustment

Adjustment should to be performed by personnel who are well-acquainted with the design and functionality of the wheelchair. When adjustment is needed, contact your nearest Authorized Permobil Service Center.

Figure 2. Drive package and shock absorbers.

Drive package

The Permobil F5 Corpus is equipped with a drive package for each drive wheel. The drive package consists of an electric motor with a drive gear and magnetic wheel lock.

Wheels

The wheelchair’s drive wheels, are available with pneumatic or Flat-Free (Foam Filled) tires. The caster wheels, have solid polyurethane tires.

Lights and reflectors

The wheelchair is equipped with reflectors on the front, rear and sides. Front/rear lights and turn indicators are optional.

Figure 3. Front Reflectors

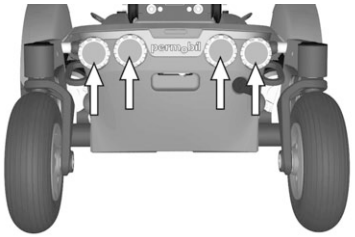

Figure 4. Rear Reflectors

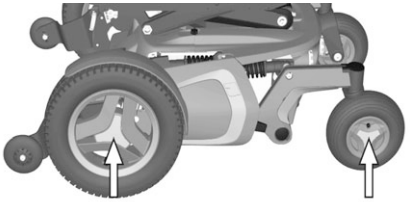

Figure 5. Side Reflectors

Batteries

The wheelchair’s batteries are located under the covers of the chassis. Both of the batteries are easily accessible for maintenance and replacement.

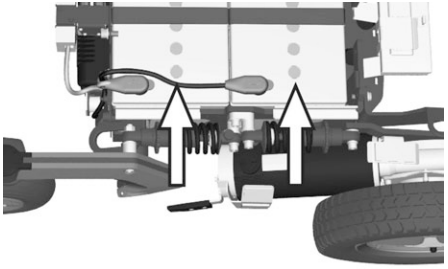

Figure 6. Batteries.

⚠ WARNING!

Be careful when using metal objects when working with batteries. A short-circuit can easily cause an explosion. Always use safety gloves and safety goggles.
Remember that the batteries are heavy and must be handled with great caution.

⚠ CAUTION!

Used or malfunctioning batteries should be disposed of responsibly in accordance with local recycling regulations.

Electronics

Main fuse

The is equipped with an automatic main fuse, which can be reset when it has been triggered. It also functions as a battery isolator and is controlled (ON/OFF) via the lever located in front of the left battery cover.

Figure 7. Main fuse.

⚠ WARNING!

If the main fuse is triggered, there is often a major electrical fault. The cause of the fault should be checked carefully before the switch is reset. Contact Service in case of doubt.

Charging socket

The charging socket is located at the rear of the chassis. See fig. 8.

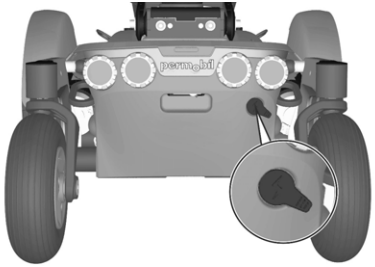

Figure 8. Charging socket.

⚠ CAUTION!

Always switch off the power supply to the control panel before interrupting the power with the main fuse.

Electric Seat Functions

The electric seat functions are driven by an electric actuator which is steplessly controlled from the wheelchair control panel. Available functions may vary depending on how the seat is equipped.

Functions

- Seat Lift
- Legrest
- Seat Tilt
- Backrest Recline

Figure 9. Electric actuator.

Manual Seat Functions

The seat can be adjusted manually by adjusting manual locking tubes with quick-acting locks in a number of fixed positions. Available functions may vary depending on how the seat is equipped.

Functions

- Legrest Angle
- Backrest recline

Figure 10. Manual clamp Tube for the Backrest Recline

Other Adjustment Options

The control panel, arm rest, foot plates and other accessories such as calf rest, thigh support, trunk support, head rest, etc. have manual adjustment and setting options.

Electric Seat Lift

Permobil can be fitted with an electrically controlled seat lift that allows the seat to be raised steeples in order to adjust its height to tables, benches, etc.

⚠ WARNING!

When the seat lift is raised, the centre of gravity is also raised, increasing the likelihood of tipping over, so only use the seat lift on a level floor.
Always drive in the lowest speed and never tip the seat tilt or the back tilt so far that the wheelchair cannot be manoeuvred safely if it runs over a slope, uneven ground or over obstacles.

Figure 11. Electric Seat Lift

Electric Seat Tilt

The electrically controlled seat tilt makes it possible to set the suitable seat angle within the operating range.

Figure 12. Electric Seat Tilt

Electric Backrest

The back angle can be adjusted (via the Recline Control), allowing the consumer to set a recline angle as needed within the operating range.

⚠ WARNING!

There is a risk of pinching accidents when using the electrical functions of the seat.

Figure 13. Electric Backrest.

Electric Legrest

The legrests can be elevated to a desired angle within the operating range.

Figure 14. Electric Legrest

Manual Seat Functions - Legrest Angle

The angle of the leg rest is adjusted via an adjustable locking tube with a quick-acting lock in a number of fixed positions.

1. Pull out the quick-acting lock's spring-action handle so that the locking tube moves freely and the leg rest can be angled.
2. Adjust the leg rest angle to the required angle and then lock the locking tube securely by releasing the handle so that it engages in the intended hole in the locking tube.
3. After adjustment, check that the leg rest is locked in position.

⚠ WARNING!

Do not put weight on the leg rest while adjusting the angle. There is a risk of pinching accidents.

Figure 15. Legrest Angle

Manual Seat Functions - Backrest Recline

The angle of the back rest is adjusted via an adjustable locking tube with a quick-acting lock in a number of fixed position.

1. Pull out the quick-acting lock's spring-action handle so that the locking tube moves freely and the back rest can be angled.
2. Adjust the back rest angle to the required angle and then lock the locking tube securely by releasing the handle so that it engages in the intended hole in the locking tube.
3. After adjustment, check that the back rest is locked in position.

⚠ WARNING!

Do not put weight on the backrest while adjusting the angle. There is a risk of pinching accidents.

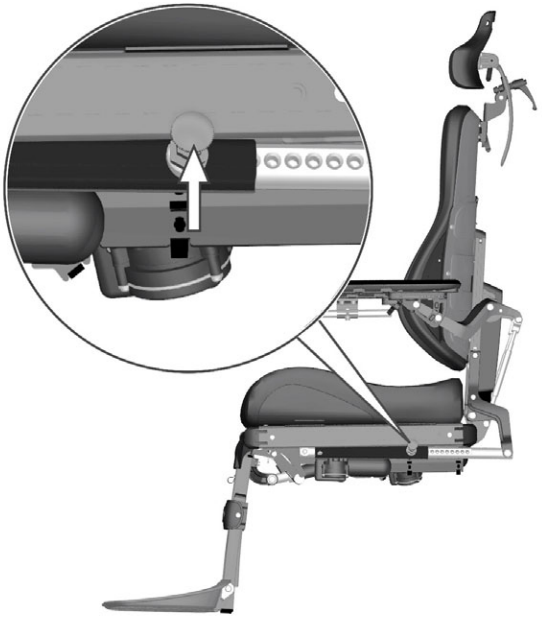

Figure 16. Backrest Recline

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Positioning Belt

Fitting the Positioning Belt

There is an accessory rail on both sides of the seat frame for mounting such items as the positioning belt. Mount the positioning belt in the upper track of the rail.

1. Screw the belt in place, with the snap lock on the side which best suits the user and the other part with the buckle on the opposite side.
2. After mounting, check that the belt buckle locks properly in the snap lock.

⚠ WARNING!

Permobil positioning belts are designed to position the user only and not to protect you in the event of a motor vehicle accident. The positioning belts do not replace use of a vehicle mounted restraint. Always wear your positioning belt while in your wheelchair. If signs of damage or wear appear, replace the positioning belt immediately through your Permobil dealer.

Figure 17. Fitted Belt, right hand side.

Figure 18. Snap Lock for the Belt.

Figure 19. Fitted Belt, left hand side.

Legrest Cover

Remove the leg rest cover by undoing the two screws and then pulling the cover directly forward. See the illustration. Fit by pushing the cover into place and then securing it with the two screws.

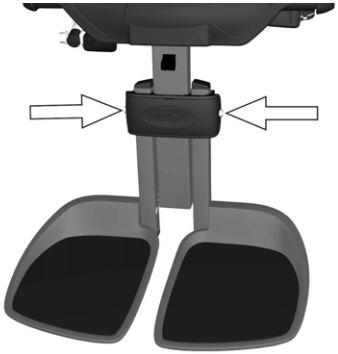

Figure 20. The leg rest cover is attached using two screws.

Leg rest Length

The leg rest length can be adjusted continuously and secured using two locking screws.

1. Remove the leg rest cover. See description above.
2. Undo the leg rest's two inner locking screws. See the illustration.
3. Adjust the leg rest to the required length and secure by tightening the locking screws.
4. Check, following adjustment, that the foot plates are fully secured. Also make sure there´s sufficient space (>25 mm.) between the floor and the footplate at all time when manoeuvring the legrest in/out. Perform this test with the user sitting in the chair loading the footplates.
5. Replace the plastic cover. See *Legrest Cover*, Page 52.

Figure 21. Leg rest length adjustment

⚠ WARNING!

Do not subject the legrest to load when adjusting. Risk of crushing.

⚠ WARNING!

After adjustment and with the seat lift in its lowest position, make sure there´s sufficient space (>25 mm.) between the floor and the footplate at all time when manoeuvring the legrest in/out. Perform this test with the user sitting in the chair loading the footplates.
Using the chair with the footplates set too low might result in personal injury or damage to the wheelchair and its surroundings.

Foot plate height

The height of the foot plates can be adjusted individually and steplessly. They are secured using the two outer locking screws.

1. Remove the leg rest cover. See the description on the previous page.
2. Undo the foot plates' locking screws. See the illustration.
3. Adjust the foot plates to the required height and secure by tightening the locking screws.
4. Check, following adjustment, that the foot plates are fully secured. Also make sure there´s sufficient space (>25 mm.) between the floor and the footplate at all time when manoeuvring the legrest in/out. Perform this test with the user sitting in the chair loading the footplates.
5. Replace the plastic cover. See *Legrest Cover*, Page 52.

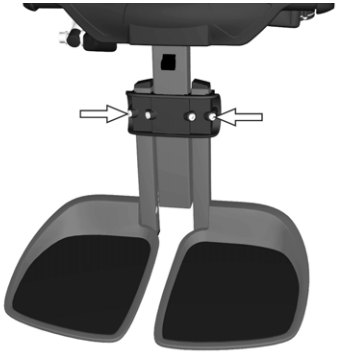

Figure 22. The height of the foot plates is secured using the outer locking screws

⚠ WARNING!

Do not subject the legrest to load when adjusting. Risk of crushing.

⚠ WARNING!

After adjustment and with the seat lift in its lowest position, make sure there´s sufficient space (>25 mm.) between the floor and the footplate at all time when manoeuvring the legrest in/out. Perform this test with the user sitting in the chair loading the footplates.
Using the chair with the footplates set too low might result in personal injury or damage to the wheelchair and its surroundings.

Foot plate angle

The angle of the foot plates is adjusted using stop screws under each foot plate.

1. Tilt up the foot plates/plate.
2. Undo the lock nut.
3. Set to the required angle by screwing the screw in or out.
4. Lock the stop screw in the required position using the lock nut.

⚠ WARNING!

Do not subject the foot plates to load when adjusting them. Risk of crushing.

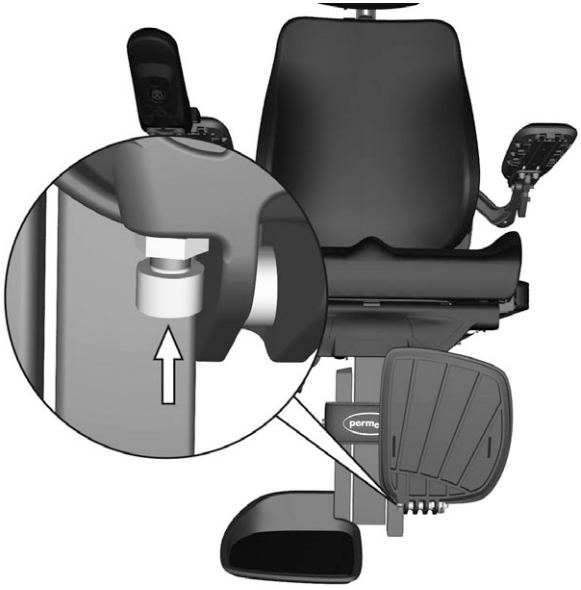

Figure 23. The angle of the foot plates can be adjusted using a screw locked with a lock nut.

Arm rest height

The height of the arm rest can be adjusted for optimal comfort.

The scale on the back of the backrest shows the current height setting for the arm rests.

1. Undo the four screws on the rear of the back rest that secure the height of the arm rest. See fig. 24.
2. Adjust to the required position using the adjustment screw on the rear of the back rest. See 24. The scale on the centre of the back rest shows the current height setting of the arm rest.
3. Secure the height of the arm rest by tightening the four screws on the rear of the back rest. See fig. 24.

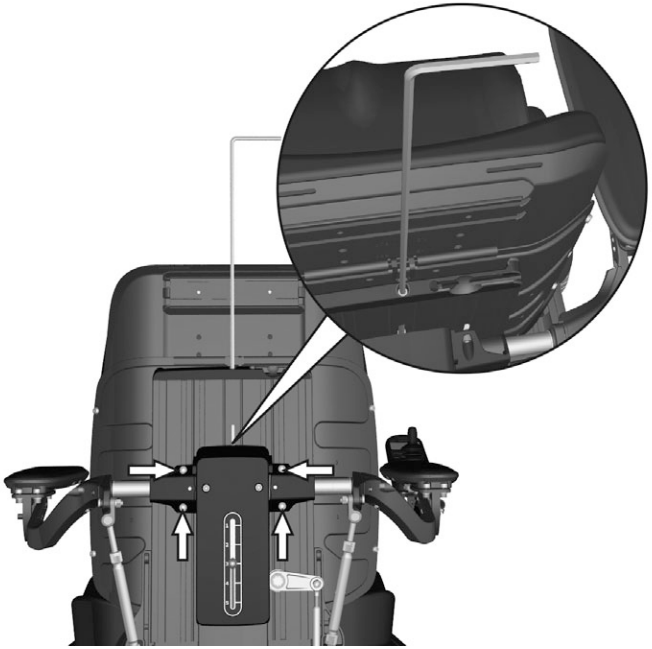

Figure 24. Adjusting the arm rest height

Arm rest angle

The arm rest angle can easily be adjusted for optimal comfort.

1. Loosen the two nuts securing the position of the adjustment bar.
2. Adjust the arm rest angle by turning the adjustment bar. See fig. 25.
3. Secure into position by tightening the lock nuts.

⚠ WARNING!

Do not subject the arm rests to load when adjusting them. Risk of crushing.

Figure 25. The position of the adjustment bars are secured with two nuts.

Arm rest height/angle

The arm rest height/angle is normally adjusted as described on pages 56 - 57. However, for special needs, the arm rests can be adjusted individually for users who want a left and right arm rest at different heights and/or angles. This adjustment can only be made for special needs. It may have negative effects on the movement of the arm rest when raising/lowering the back rest.

⚠ WARNING!

Do not subject the arm rests to load when adjusting them. Risk of crushing.
This type of adjustment should only be made for special needs. It may have negative effects on the movement of the arm rest when raising/lowering the back rest.

1. Loosen the two nuts (D) securing the position of the adjustment bar.
2. Adjust the arm rest height by turning the adjustment bars (C). See fig. 26.
3. Secure into position by tightening the lock nuts (D).
4. The angle of the arm rest is secured using a screw (B). Move the screw from a fixed position (A) to a flexible position (B). See fig. 26.

⚠ WARNING!

When the screw is removed, the armrests angle setting is released. Support the armrest from underneath with one hand at the front edge as the screw is removed. Be careful, there is a risk of crushing.

5. Adjust the arm rest to the required angle.
6. Fix the setting by tightening the screw (B). See fig. 26.

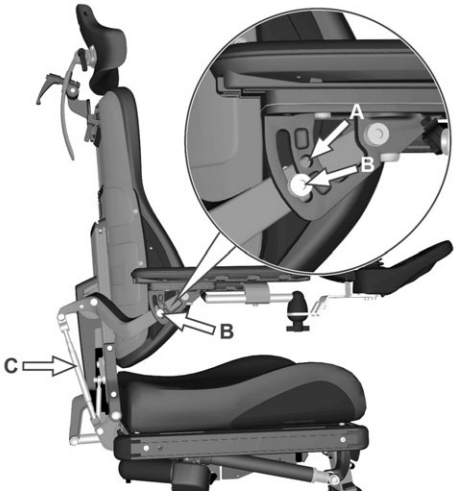

Figure 26. Individual adjustment of the arm rest height/angle

Head rest (accessory)

This head rest has expanded adjustment options to give the user optimal comfort. The head rest can also be removed/remounted while preserving the same setting.

Figure 27. Head rest with extensive adjustment options.

Removal

1. Undo the handle (3) on the rear of the back rest. See fig. 28.
2. Remove the head rest by lifting it straight up.

Mounting

1. Mount in the reverse order.

Adjustment of height/depth

1. Undo the handle (1) on the rear of the back rest. See fig. 28.
2. Adjust the height/depth of the head rest as required.
3. Tighten the handle (1).

Adjustment of angle

1. Undo the handle (2) on the rear of the head rest. See fig. 28.
2. Adjust the angle of the head rest as required.
3. Tighten the handle (2).

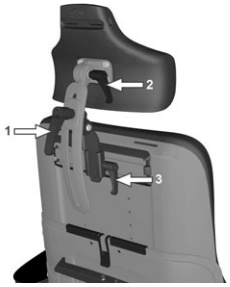

Figure 28. Head rest adjustment.

⚠ WARNING!

Do not put weight on the head rest while adjusting it.

Rotatable panel holder

The location of the control panel can be adjusted lengthwise for the optimal driving position. It is also possible to adjust the angle of the panel sideways to facilitate getting in and out.

Length adjustment

1. Undo the screw (A) on the panel joint and adjust the panel to the required position.
2. Tighten the screw (A).

Angle adjustment

1. Tighten/loosen the knob (B) on the friction joint to adjust how easy or stiff the panel is for angling laterally.

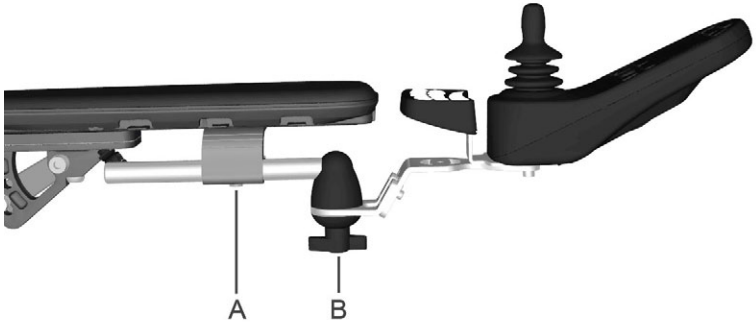

Figure 29. Length Adjustment screw (A) and Friction Joint Handle (B)

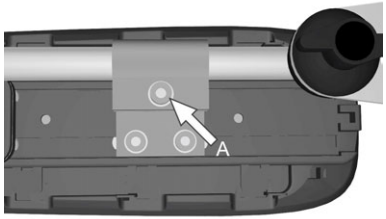

Figure 30. Length Adjustment screw (A)

Parallel Panel Holder

The location of the control panel can be adjusted lengthwise for the optimal driving position. The panel can also be pushed out to the side, diagonally back to facilitate getting in and out.

Length adjustment

1. Undo the screw on the underside of the armrest and adjust the panel to the required position.
2. Tighten the screw.

Adjusting the friction joint

1. Using the knob on the friction joint, it is possible to adjust how easy or stiff the panel is for pushing out to the side.

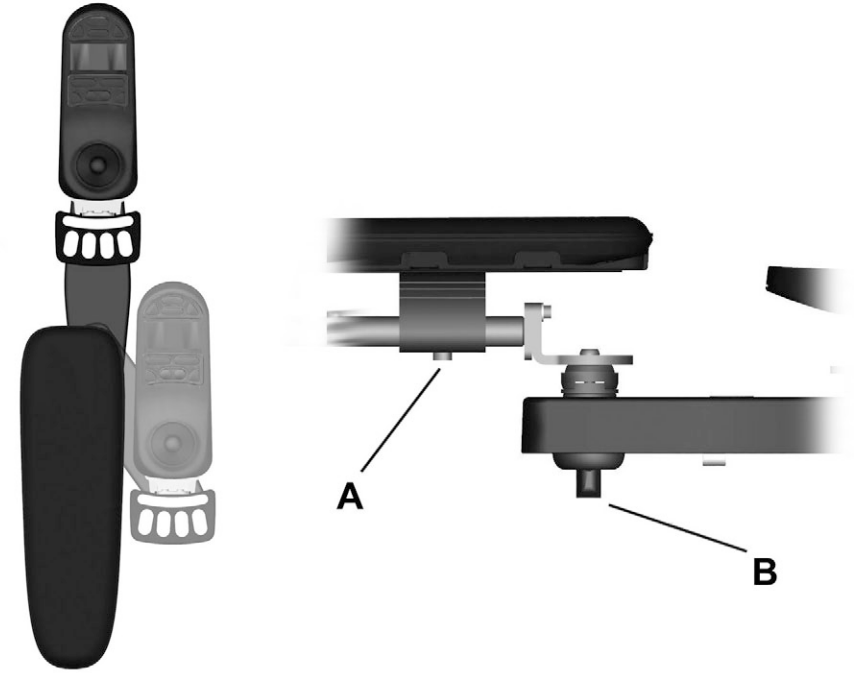

Figure 31. Length Adjustment screw (A) and Friction Joint Handle (B)

R-NET CONTROL PANEL WITH LCD MONOCHROME DISPLAY

General 64
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Function Buttons 66
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General

The Control Panel consists of a joy-stick, function buttons and a Display. At the back of the panel you also find the Charger Socket and two Jack Sockets.

Your wheelchair may also be equipped with an extra Seat Control Panel in addition to the control panel.

Figure 32. Control Panel

Charger Socket

⚠ WARNING!

The wheelchair's warranty will be voided if any device other than a battery charger supplied with the wheelchair, or the lock key is connected into the control panels charger socket.

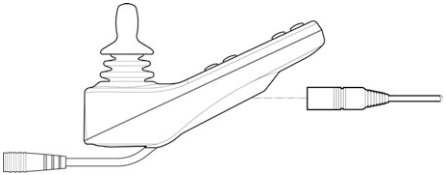

Figure 33. Charger Socket

This socket should only be used for charging or locking the wheelchair. Do not con. nect any type of programming cable into this socket. This socket should not be used as a power supply for any other electrical device. Connection of other electrical devices may damage the control system or affect the E.M.C. performance of the wheelchair.).

Function Buttons

On the control panel there are a total of 10 Function Buttons.

On/Off Button

The On/Off button applies power to the control system electronics, which in turn supply power to the wheelchair's motors.

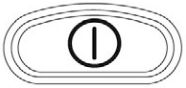

Figure 34. On/Off Button

Horn Button

The horn will sound while this button is depressed.

Figure 35. Horn Button

Maximum Speed Buttons

These buttons decreases/increases the wheelchairs maximum speed. Depending on the way the control system has been programmed a momentary screen may be displayed when these buttons are pressed.

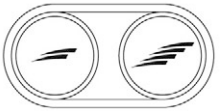

Figure 36. Speedbuttons, Decrease/ Increase

Mode Button

The Mode button allows the user to navigate through the available operating Modes for the control system. The available modes are dependant on programming and the range of auxiliary output devices connected to the control system.

Figure 37. Mode Button

Profile Button

The Profile button allows the user to navigate through the available Profiles for the control system. The number of available Profiles is dependant on how the control system is programmed. Depending on the way the control system has been programmed a momentary screen may be displayed when the button is pressed.

Figure 38. Profile Button

Hazard Warning Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates/inactivates the wheelchairs hazards lights. this function is used when the wheelchair is positioned in a way making it a obstruction for others. Push the button to activate the hazard lights and push it again to inactivate them. When activated the indicator LED will flash in sync with the wheelchair's indicators.

Figure 39. Hazard Button and LED

Lights Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's lights. Depress the button to turn the lights on and depress the button again to turn them off. When activated the lights LED will illuminate.

Figure 40. Lights Button and LED

Left Indicator Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's left indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the left indicator LED will flash in sync with the wheelchair's indicator.

Figure 41. Left Indicator and LED

Right Indicator Button and LED*)

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's right indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the right indicator LED will flash in sync with the wheelchair's indicator.

Figure 42. Right Indicator and LED

Jack Sockets

The External On/Off Switch Jack (1) allows the user to turn the control system on and off using an external device, such as a buddy button.

The External Profile Switch Jack (2) allows the user to select Profiles using an external device, such as a buddy button. To change the Profile whilst driving simply press the button.

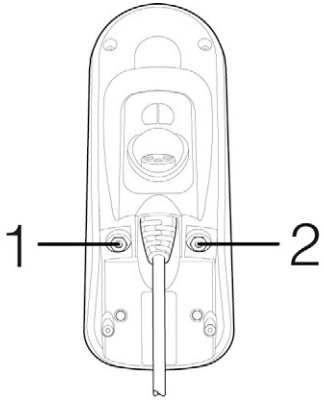

Figure 43. Jack Sockets

Display

The status of the control system can be understood by observing the display. The control system is on when the display is backlit.

Screen Symbols

The Drive screen for the R-net has common components, which will always appear, and components which will only appear under certain conditions. Below is a view of a typical Drive screen in Profile 1.

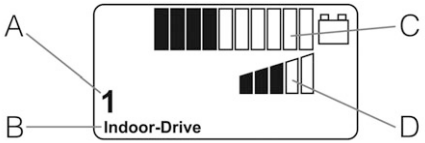

Figure 44. Drive Screen

1. Current Profile
2. Profile Name
3. Battery Indicator
4. Speed Indicator

Locking/unlocking the Control System

The Control System can be locked in one of two ways. Either using a button sequence on the keypad or with a physical Key. How the Control system is locked depends on how your system is programmed.

Figure 45. The Lock Symbol is displayed when the wheelchair is locked.

Keypad Locking

To lock the wheelchair using the keypad:

- While the control system is switched on, depress and hold the On/Off button.
- After 1 second the control system will beep. Now release the On/Off button.
- Deflect the joystick forwards until the control system beeps.
- Deflect the joystick in reverse until the control system beeps.
- Release the joystick, there will be a long beep.
- The wheelchair is now locked.

To unlock the wheelchair:

- If the control system has switched off, press the On/Off button.
- Deflect the joystick forwards until the control system beeps.
- Deflect the joystick in reverse until the control system beeps.
- Release the joystick, there will be a long beep.
- The wheelchair is now unlocked.

Key Locking

To lock the wheelchair with a key lock:

- Insert and remove a PGDT supplied key into the Charger Socket on the Joystick Module.
- The wheelchair is now locked.

To unlock the wheelchair:

- Insert and remove a PGDT supplied key into the Charger Socket.
- The wheelchair is now unlocked.

Figure 46. The Lock Symbol is displayed when the wheelchair is locked.

Seat functions

Not applicable to all seat models

On some seats the electrical functions can be controlled with the help of the control panel joystick. Some models are equipped with three memory locations. Each memory location can store the position of the seat’s adjustment device. This means that it is easy to retrieve a seat position saved earlier.

Maneuvering the seat

⚠ CAUTION!

If the symbol ”M” appears together with the seat icon, this means that a memory function has been activated. Move the joystick to the left or right to choose a seat function instead.

1. Press the ”Mode” button one or more times until an icon for seat function appears in the control panel display. See fig. 48.
2. Move the joystick to the left or right to select a seat function. The icon for the seat function selected appears in the display.
3. Move the joystick forwards or backwards to activate the function.

Below is an example of the icons that may be shown in the display. Which icons are shown varies depending on the seat model and available functions.

Figure 48. Move the joystick to the left or right to select a function. The icon for the function selected appears in the display.

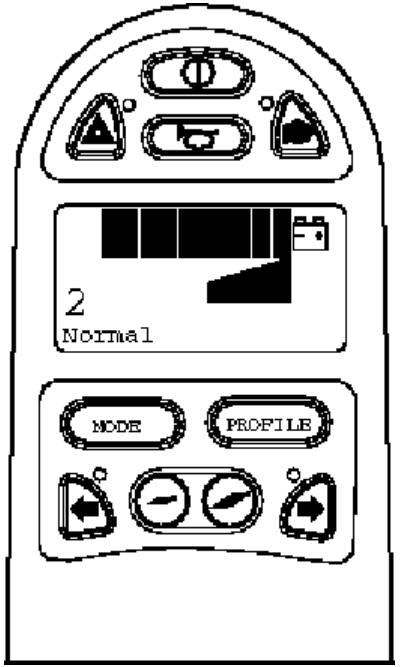

Figure 47. Standard display image with speed indicator.

Return to drive mode

Press the ”Mode” button one or more times until a standard display image with speed indicator appears in the control panel display - see fig. 47.

Memory

The control system on some seats have three memory locations for seat positions. Each memory location can store the position of the seat's adjustment device. This means that it is easy to retrieve a seat position saved earlier.

Retrieving position from memory

1. Press the "Mode" button one or more times until a seat icon appears in the control panel display.
2. Move the joystick to the left or right to select a memory location (M1, M2 or M3). A seat icon and memory symbol "M" for the memory location selected are shown in the control panel display - see fig. 49.
3. Move and hold the joystick forwards. The seat adjusts to the position stored earlier. For reasons of safety, the joystick must be held forwards until the seat is fully adjusted to the required position. Once the seat has adjusted to the saved position, it stops moving.

NOTE!
Movement of the seat can be stopped at any time by releasing the joystick.

Return to drive mode

Press the "Mode" button one or more times until a standard display image with speed indicator appears in the control panel display - see fig. 47.

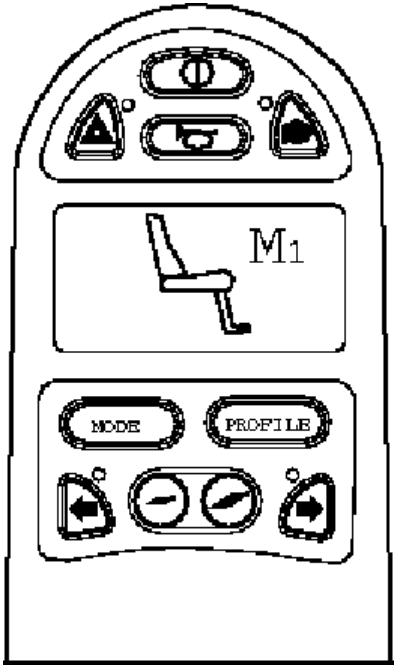

Figure 49. Memory function activated.

Saving position to memory

1. Set the seat's electrical functions to the desired mode.
2. If not activated, activate the seat/ memory function by pressing the "Mode" button one or more times until a seat icon appears in the control panel display.
3. Move the joystick to the left or right to select a memory location (M1, M2 or M3). A seat icon and memory symbol "M" for the memory location selected are shown in the control panel display - see fig. 50.
4. Move the joystick backwards to activate the "save" function. An arrow will appear next to the memory symbol "M" - see fig. 51.
5. Save the current position by moving the joystick forwards and holding it in that position until the arrow next to the memory symbol "M" disappears.

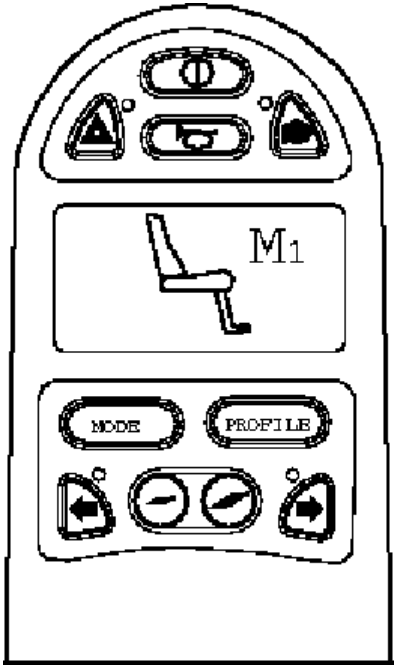

Figure 50. Memory function activated.

Return to drive mode

Press the ”Mode” button one or more times until a standard display image with speed indicator appears in the control panel display - see fig. 47.

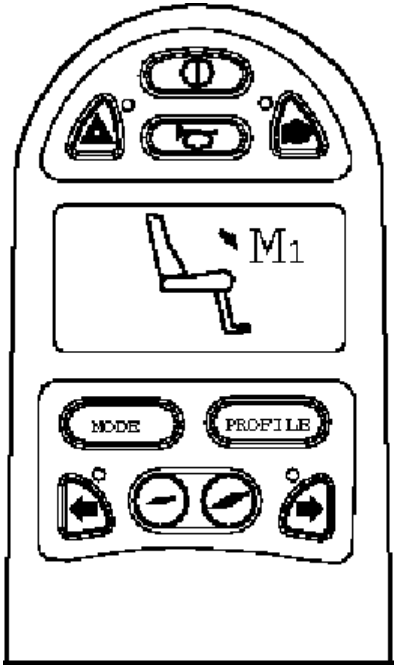

Figure 51. Save function activated.

R-NET CONTROL PANEL WITH LCD COLOR DISPLAY

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General

The Control Panel consists of a joystick, function buttons and a display. At the front of the panel is the Charger Socket. Two Jack Sockets are located on the bottom of the panel.

Your wheelchair may also be equipped with an extra Seat Control Panel in addition to the control panel.

Figure 52. Control Panel

Charger Socket

⚠ WARNING!

The wheelchair's warranty will be voided if any device other than a battery charger supplied with the wheelchair, or the lock key is connected into the control panels charger socket.

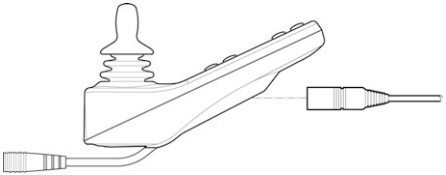

Figure 53. Charger Socket

This socket should only be used for charging or locking the wheelchair. Do not connect any type of programming cable into this socket. This socket should not be used as a power supply for any other electrical device. Connection of other electrical devices may damage the control system or affect the E.M.C. performance of the wheelchair.).

Function Buttons

On the control panel there are a total of 10 Function Buttons.

On/Off Button

The On/Off button applies power to the control system electronics, which in turn supply power to the wheelchair's motors.

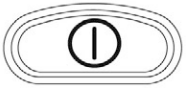

Figure 54. On/Off Button

Horn Button

The horn will sound while this button is depressed.

Figure 55. Horn Button

Maximum Speed Buttons

These buttons decreases/increases the wheelchairs maximum speed. Depending on the way the control system has been programmed a momentary screen may be displayed when these buttons are pressed.

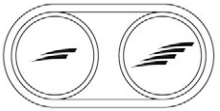

Figure 56. Speedbuttons, Decrease/ Increase

Mode Button

The Mode button allows the user to navigate through the available operating Modes for the control system. The available modes are dependant on programming and the range of auxiliary output devices connected to the control system.

Figure 57. Mode Button

Profile Button

The Profile button allows the user to navigate through the available Profiles for the control system. The number of available Profiles is dependant on how the control system is programmed. Depending on the way the control system has been programmed a momentary screen may be displayed when the button is pressed.

Figure 58. Profile Button

Hazard Warning Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates/inactivates the wheelchairs hazards lights. this function is used when the wheelchair is positioned in a way making it a obstruction for others. Push the button to activate the hazard lights and push it again to inactivate them. When activated the indicator LED will flash in sync with the wheelchair's indicators.

Figure 59. Hazard Button and LED

Lights Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's lights. Depress the button to turn the lights on and depress the button again to turn them off. When activated the lights LED will illuminate.

Figure 60. Lights Button and LED

Left Indicator Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's left indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the left indicator LED will flash in sync with the wheelchair's indicator.

Figure 61. Left Indicator and LED

Right Indicator Button and LED*)

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's right indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the right indicator LED will flash in sync with the wheelchair's indicator.

Figure 62. Right Indicator and LED

Jack Sockets

The External On/Off Switch Jack (1) allows the user to turn the control system on and off using an external device, such as a buddy button.

The External Profile Switch Jack (2) allows the user to select Profiles using an external device, such as a buddy button. To change the Profile whilst driving simply press the button.

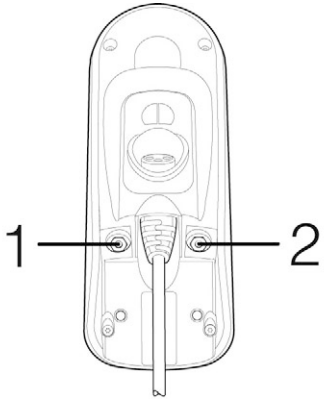

Figure 63. Jack Sockets

Display

The status of the control system can be understood by observing the display. The control system is on when the display is backlit.

Screen Symbols

The Drive screen for the R-net has common components, which will always appear, and components which will only appear under certain conditions. Below is a view of a typical Drive screen in Profile 1.

A. Clock
B. Speedometer
C. Profile name
D. Current profile
E. Battery indicator
F. Max. Speed indicator

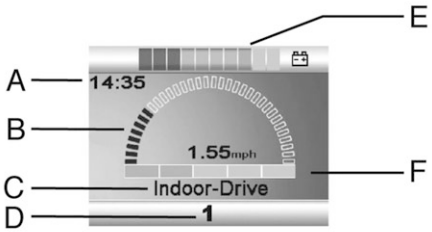

Figure 64. Drive Screen

Battery Indicator

This displays the charge available in the battery and can be used to alert the user of the status of the battery.

Figure 65. Battery Indicator

Steady: This indicates that all is well.

Flashing Slowly: The control system is functioning correctly, but you should charge the battery as soon as possible.

Stepping Up: The wheelchair batteries are being charged. You will not be able to drive the wheelchair until the charger is disconnected and you have switched the control system off and on again.

Speed Indicator

This displays the current speed setting.

The speed setting is adjusted using the Speed Buttons.

Figure 66. Speed Indicator

Current Profile

The Profile Number describes which Profile the control system is currently operating in. The Profile Text is the name or description of the Profile the control system is currently operating in.

Figure 67. Currant Profile

In Focus

When the control system contains more then one method of direct control, such as a secondary Joystick Module or a Dual Attendant Module, then the Module that has control of the wheelchair will display the In Focus symbol.

Figure 68. In Focus

Speed Limit

If the speed of the wheelchair is being limited; for example, by a raised seat, then this symbol will be displayed. If the wheelchair is being inhiited from driving, then the symbol will flash.

Figure 69. Speed Limit

Restart

When the control system requires a restart; for example, after a module reconfiguration, this symbol will be flashed.

Figure 70. Restart

Control System Temperature

This symbol is displayed when the control system has intentionally reduced its own power, in order to protect itself against heat damage.

Figure 71. Control System Temperature

Motor Temperature

This symbol is displayed when the control system has intentionally reduced the power to the motors, in order to protect them against heat damage.

Figure 72. Motor Temperature

Timer

This symbol is displayed when the control system is changing between different states. An example would be entering into Programming Mode. The symbol is animated to show the sands falling.

Figure 73. Timer

E-Stop

If the control system is programmed for latched drive or actuator operation, then it is normal for an Emergency Stop Switch to be connected into the External Profile Switch Jack. If the Emergency Stop Switch is operated or disconnected, this symbol will flash.

Figure 74. E-Stop

Installation menu

The installation menu permits the user to set the clock, the display brightness, background color etc. Access the menu by holding down the keys for higher and lower maximum speed simultaneously. Scroll through the menu by moving the joystick up or down.

Exit the installation menu by first selecting "Exit" at the bottom of the menu and then moving the joystick to the right.

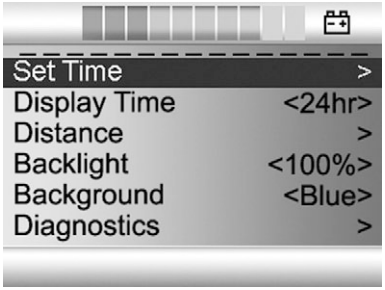

Figure 75. Installation menu

Setting the time

(Setting the time (Set Time): Shows the total distance travelled by the control system.

Displaying the time (Display Time)

(Displaying the time (Display Time): Select "Display Time" in the menu. Move the joystick right or left to select 12 or 24 hour display, or "Off" to remove the clock from the display.

Distance measurement (Distance)

(Distance measurement (Distance): Select "Distance" in the menu. Move the joystick to the right to go to the menu for setting distance measurement. Then select "Total distance", "Trip", "Distance display" or "Reset" by moving the joystick up or down.

- **Total distance** *(Total Distance)::*
- **Trip***(Trip Distance):* Shows the total distance traveled since the last reset.
- **Distance display** (Display Distance): Selects Trip or Total Distance in the display.
- **Reset** (Clear trip distance): Move the joystick to the right to reset the Trip measurer.
- **Exit** (Exit): Move the joystick to the right to exit the installation menu.

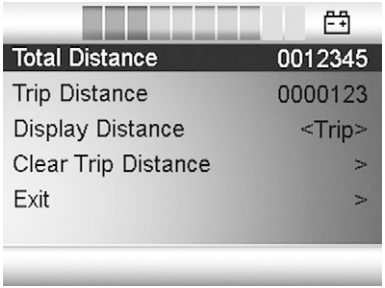

Figure 76. Distance measurement

Locking/unlocking the Control System

The Control System can be locked in one of two ways. Either using a button sequence on the keypad or with a physical Key. How the Control system is locked depends on how your system is programmed.

Figure 77. The Lock Symbol is displayed when the wheelchair is locked.

Keypad Locking

To lock the wheelchair using the keypad:

- While the control system is switched on, depress and hold the On/Off button.
- After 1 second the control system will beep. Now release the On/Off button.
- Deflect the joystick forwards until the control system beeps.
- Deflect the joystick in reverse until the control system beeps.
- Release the joystick, there will be a long beep.
- The wheelchair is now locked.

To unlock the wheelchair:

- If the control system has switched off, press the On/Off button.
- Deflect the joystick forwards until the control system beeps.
- Deflect the joystick in reverse until the control system beeps.
- Release the joystick, there will be a long beep.
- The wheelchair is now unlocked.

Key Locking

To lock the wheelchair with a key lock:

- Insert and remove a PGDT supplied key into the Charger Socket on the Joystick Module.
- The wheelchair is now locked.

To unlock the wheelchair:

- Insert and remove a PGDT supplied key into the Charger Socket.
- The wheelchair is now unlocked.

Figure 78. The Lock Symbol is displayed when the wheelchair is locked.

Seat functions

Not applicable to all seat models

On some seats the electrical functions can be controlled with the help of the control panel joystick. Some models are equipped with three memory locations. Each memory location can store the position of the seat's adjustment device. This means that it is easy to retrieve a seat position saved earlier.

Maneuvering the seat

1. Press the "Mode" button one or more times until an icon for seat function appears in the control panel display. See fig. 79.
2. Move the joystick to the left or right to select a seat function. The icon for the seat function selected appears in the display.

   Below is an example of the icons that may be shown in the display. Which icons are shown varies depending on the seat model and available functions.

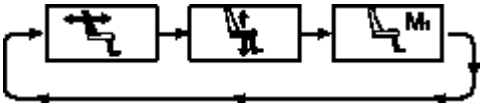

Figure 79. Move the joystick to the left or right to select a function. The icon for the function selected appears in the display.

⚠ CAUTION!

If the symbol ”M” appears together with the seat icon, this means that a memory function has been activated. Move the joystick to the left or right to choose a seat function instead.

3. Move the joystick forwards or backwards to activate the function.

Return to drive mode

Press the ”Mode” button one or more times until a standard display image with speed indicator appears in the control panel display - see fig. 80.

Figure 80. Standard display image with speed indicator.

Memory

Retrieving position from memory

The control system on some seats have three memory locations for seat positions. Each memory location can store the position of the seat's adjustment device. This means that it is easy to retrieve a seat position saved earlier.

1. Press the "Mode" button one or more times until a seat icon appears in the control panel display.
2. Move the joystick to the left or right to select a memory location (M1, M2 or M3). A seat icon and memory symbol "M" for the memory location selected are shown in the control panel display - see fig. 81.
3. Move and hold the joystick forwards. The seat adjusts to the position stored earlier. For reasons of safety, the joystick must be held forwards until the seat is fully adjusted to the required position. Once the seat has adjusted to the saved position, it stops moving.

Figure 81. Memory function activated.

NOTE!
Movement of the seat can be stopped at any time by releasing the joystick.

Return to drive mode

Press the "Mode" button one or more times until a standard display image with speed indicator appears in the control panel display - see fig. 80.

Saving position to memory

1. Set the seat's electrical functions to the desired mode.
2. If not activated, activate the seat/ memory function by pressing the "Mode" button one or more times until a seat icon appears in the control panel display.
3. Move the joystick to the left or right to select a memory location (M1, M2 or M3). A seat icon and memory symbol "M" for the memory location selected are shown in the control panel display - see fig. 82.
4. Move the joystick backwards to activate the "save" function. An arrow will appear next to the memory symbol "M" - see fig. 83.
5. Save the current position by moving the joystick forwards and holding it in that position until the arrow next to the memory symbol "M" disappears.

Figure 82. Memory function activated.

Return to drive mode

Press the "Mode" button one or more times until a standard display image with speed indicator appears in the control panel display - see fig. 80.

Figure 83. Save function activated.

R-NET LED CONTROL PANEL

General 100
Charger Socket 101
Function Buttons 102
Battery Voltage Indicator 105
Maximum Speed Indicator 106
Seat Indicator 107

General

The Control Panel consists of a joy-stick and function buttons. At the front of the panel is the Charger Socket.

Your wheelchair may also be equipped with a Seat Control Panel inaddition to the control panel.

Figure 84. Control Panel

Charger Socket

⚠ WARNING!

The wheelchair's warranty will be voided if any device other than a battery charger supplied with the wheelchair, or the lock key is connected into the control panels charger socket.

This socket should only be used for charging or locking the wheelchair. Do not connect any type of programming cable into this socket This socket should not be used as a power supply for any other electrical device. Connection of other electrical devices may damage the control system or affect the E.M.C. performance of the wheelchair.).

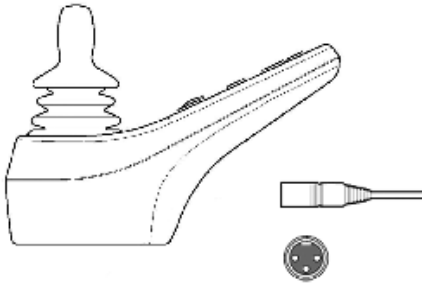

Figure 85. Charger Socket

Function Buttons

On the control panel there are a total of 10 Function Buttons.

On/Off Button

The On/Off button applies power to the control system electronics, which in turn supply power to the wheelchair's motors.

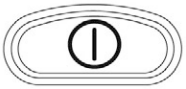

Figure 86. On/Off Button

Horn Button

The horn will sound while this button is depressed.

Figure 87. Horn Button

Maximum. Speed/Choice of Profile Button and LED

These keys normally reduce or increase the wheelchair's maximum speed. In special applications, the keys can instead control the choice of driving profile.

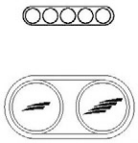

Figure 88. Maximum Speed/Choice of Profile Button and LED

Mode Button

These keys normally reduce or increase the wheelchair's maximum speed. In special applications, the keys can instead control the choice of driving profile.

Figure 89. Mode Button

Hazard Warning Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates/inactivates the wheelchairs hazards lights. this function is used when the wheelchair is positioned in a way making it a obstruction for others. Push the button to activate the hazard lights and push it again to inactivate them. When activated the indicator LED will flash in sync with the wheelchair's indicators.

Figure 90. Hazard Button and LED

Lights Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's lights. Depress the button to turn the lights on and depress the button again to turn them off. When activated the lights LED will illuminate.

Figure 91. Lights Button and LED

Left Indicator Button and LED

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's left indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the left indicator LED will flash in sync with the wheelchair's indicator.

Figure 92. Left Indicator and LED

Right Indicator Button and LED*)

NOTE!
Only active if the wheelchair is provided with lights

This button activates and de-activates the wheelchair's right indicator. Depress the button to turn the indicator on and depress the button again to turn it off. When activated the right indicator LED will flash in sync with the wheelchair's indicator.

Figure 93. Right Indicator and LED

Battery Voltage Indicator

Shows the voltage remaining in the batteries (from left to right):

Red+Yellow+Green = Fully charged

Red+Yellow = Half charged

Red = Charge the batteries

A good way of using this indicator is to learn how it works while you are driving. Like a fuel gage in a car, it does not show exactly how much "fuel" is left, but it gives you a rough idea so that you can avoid unnecessary stops due to discharged batteries.

The indicator shows a more exact value after approximately 1 minute of travel.

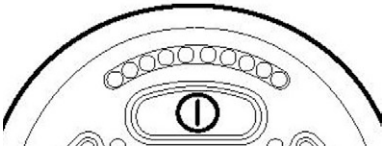

Figure 94. Battery Voltage Indicator

⚠ CAUTION!

The battery voltage indicator also functions as a “fault indicator” for the wheelchair’s electronics. See page 96 for further information.

Maximum Speed Indicator

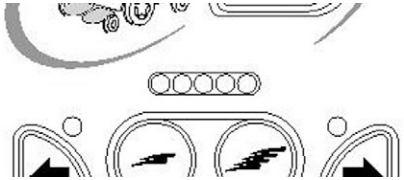

Figure 95. Maximum Speed Indicator

Speed

Indicates the maximum speed set for the wheelchair.

1 - 2 lamps = Low speed

3 - 4 lamps = Average speed

5 lamps = Max. speed

Driving profile

For special applications, the wheelchair can be programmed with more than one driving profile. In this case, the indicator's LEDs will instead display the selected driving profile. There can be up to 5 driving profiles.

⚠ CAUTION!

The indicator for max. speed/driving profile also functions as a "fault indicator" for the wheelchair's electronics. See page 96 for further information.

Seat Indicator

On certain seats the electrical functions for seat lift, seat angle, backrest angle and legrest angle are controlled with the control panel joystick. In this case the active seat function is indicated on the control panel seat indicator.

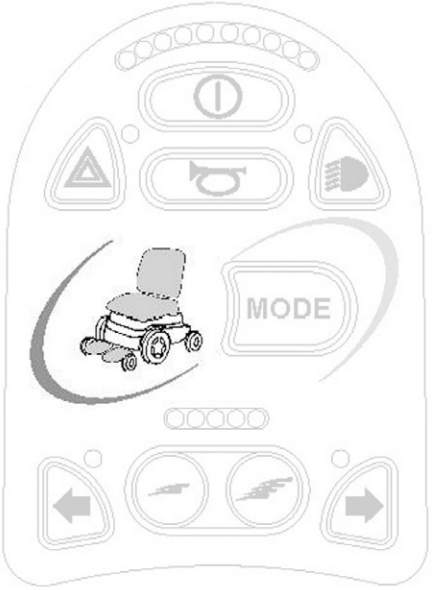

Figure 96. Seat Indicator

ICS CONTROL PANEL

General 110
Functions 112

General

The seat's electrical functions may be controlled from the Drive System Control Panel. On seats equipped with the control system ICS the electrical functions may also be controlled from the ICS Control Panel.

The seat's electrical functions are controlled from the Control Panel. The control system may be in the form of conventional push buttons or may have levers for those users who find these easier to maneuver. The lever is moved forward to operate the front button and back to operate the rear button. The functions of the button box are here described for fitting with conventional push buttons, but the functions are the same whatever the design of the control system.

Each switch location can have two functions, and the symbol for the active function is illuminated. Functions are changed using the shift function.

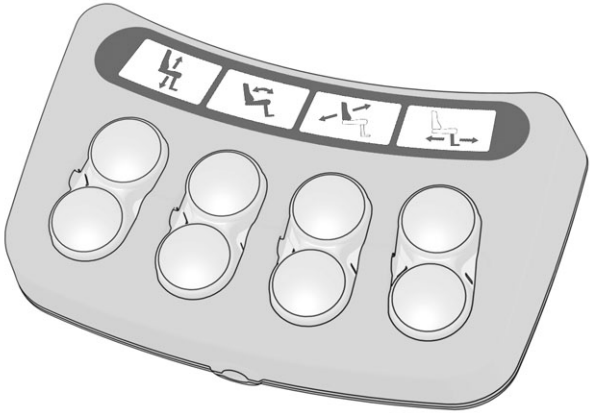

Figure 97. Control Panel

⚠ CAUTION!

The number of available functions will vary depending on how your wheelchair and seat are equipped.

Feedback

The control panel provides feedback related to the available Seat Functions, active Seat Functions Inhibits, active Drive Speed Limits and active Drive Inhibits through its LEDs.

There are three states that the LED above the switch can have:

Off

The function icon is ”extinguished” or ”OFF”. This signifies that the function is not currently active. The selection of the Left/Right seat functions is toggled with the ”Shift Switch”

Solid

A SOLID LED communicates ”Drive Speed” related information to the user

Solid green LED signifies that the chair can drive at full speed.

Solid yellow LED signifies that the drive speed is limited due to the position of this actuator.

Solid red LED signifies that the drive is inhibited due to the position of this actuator.

Flashing

A FLASHING LED communicates ”Actuator” related information to the user.

Flashing green LED signifies a special or extended feature.

Flashing yellow LED signifies that the Seat Function is inhibited in one direction, due to a safety limit. The switches below the icon will only move the seat function in the ”safe” direction.

Flashing red LED signifies that there has been an error detected with the actuator. Depending on the error, the switches below may not operate the seat function. Note the circumstances when this indication occurs as this information may help your service provider. Contact your service provider for additional assistance, as service may be needed.

Functions

Seat lift

The seat can be raised by pressing the upper part of the button and lowered by pressing the lower part.

Figure 98. Seat Lift

Backrest recline

The backrest can be moved backwards by pressing the lower part of the button and brought back by pressing the upper part.

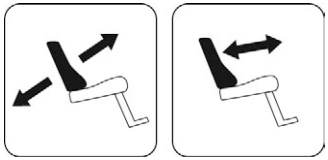

Figure 99. Backrest recline

Seat Tilt

The seat can be angled backwards by pressing the lower part of the button and forwards by pressing the upper part.

Figure 100. Seat Tilt

Leg rest Angle

The leg rest can be moved out by pressing the upper part of the button and brought back by pressing the lower part.

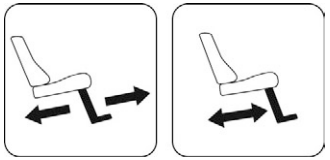

Figure 101. Leg Rest

Anterior Tilt

The seat can be angled forwards by pressing the upper part of the button and backwards by pressing the lower part.

Figure 102. Anterior Tilt

Power Footplates

The footplates can be raised by pressing the lower part of the button and lowered by pressing the upper part.

Figure 103. Power Footplates

RA Footplate

The footplate can be lowered at the same time as the seat lift is raised by pressing the upper part of the button. Pressing the lower part of the button will raise the footplate and at the same time lower the seat lift. This function can help the user getting in to and out of the wheelchair.

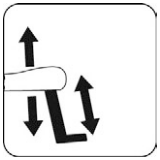

Figure 104. RA Footplate

Shift

Change the control button functions by pressing the **shift** button. Change the function back again by pressing the **shift** button. The symbol for the active function will illuminate.

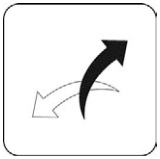

Figure 105. Shift

Memory Function

ICS Control Panels equipped with Memory can store and recall up to three seat positions. A seat function (e. g. power tilt, power recline, power legs, etc.) can only remember a saved memory position if it has an actuator with position feedback installed.

Figure 106. Memory function

HANDLING

General 116
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Driving rules 120
Manual Release of the Magnetic Wheel Locks 125
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General

The Permobil F5 Corpus is designed for use both indoors and outdoors. When you drive indoors, you must be careful in, for example, narrow passages, when going through doors and entrances and when using lifts, ramps, etc.

You should also consider the risk of crushing when you use the electric seat lift and seat angle functions, above all if the wheelchair has been driven under tables, benches, etc. Outdoors you should remember to drive very slowly down steep slopes and to be very careful when driving on uneven surfaces, up slopes, on side slopes and over obstacles. Always observe a good safety distance when driving near edges and precipices.

We recommend that you do repeated test drives in an environment in which you feel safe so that you are very familiar with how the wheelchair and its accessories behave in different situations before you start to use the wheelchair on public roads and in other public locations.

General - Driving

Check that the control panel is correctly fitted and the joystick is in the neutral position. Ensure that you have good support, for example the wheelchair's arm rest, for the part you use to handle the joystick with. Do not just use the joystick as a support. Fast turns and driving on uneven surfaces can interfere with your ability to handle the wheelchair safely.

⚠ WARNING!

Always make sure your feet are correct and securely positioned on the foot plates before you operate the wheelchair. Use foot straps if needed. Failure to do this increases the risk of personal injury.

1. Switch on the power by pressing the start key on the control panel.
2. Select a suitable driving profile with the PROFILE key (if the system is programmed for more than one driving profile).
3. Move the joystick carefully forwards to drive forwards or backwards to reverse.
4. The speed setting is adjusted using the keys for higher and lower speed. The wheelchair's electronics allow very slow driving over edges. You can drive up to the edge and then carefully drive over it.

Joystick Error

If the joystick is moved from the central position before, during or immediately after the control system is switched on, the screen image for a shifted joystick will be displayed for 5 seconds. On control panels without a display, the LEDs on the battery voltage indicator will "wander" backwards and forwards instead. If the joystick is not released during this time, a joystick error will be registered and the wheelchair will not drive. To enable the wheelchair to drive again, ensure that the joystick is in the central position. Then switch the wheelchair off and on again.

If control system detects an error in the wheelchair electronics which needs attention, a "Diagnostics screen" will appear on control panels with display. On control panels without display, the battery voltage indicator LEDs will flash rapidly instead. If this happens, you should get in touch with your service contact as soon as possible.

Figure 107. Shifted Joystick.

Figure 108. "Moving" LEDs.

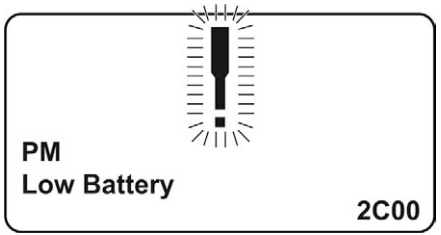

Figure 109. Diagnostics screen.

Driving technique

The control panel's electronics ”interpret” the movements of the joystick and move the wheelchair as intended. For normal driving, the user needs to employ no complex techniques, which is an advantage if the user is inexperienced. A good way of starting is quite simply to move the joystick in the direction you want to go. The wheelchair then moves in the direction in which the joystick is pointing.

However, always remember to drive as gently as possible and to avoid sudden braking and evasive maneuvers.

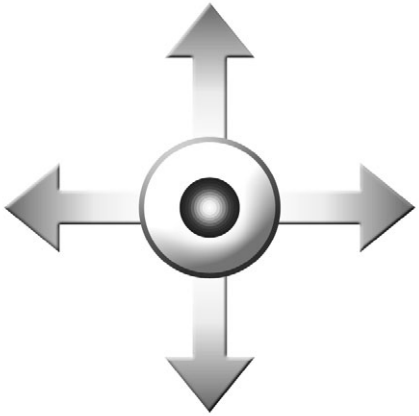

Figure 110. Joystick Maneuvering

⚠ CAUTION!

Do not take the first test drive on your own. The test drive is intended to establish how you and the wheelchair work together and you may need assistance.
Before driving, check that the brake release lever is in the drive position.

⚠ WARNING!

Do not just use the joystick as a support. Fast turns and driving on uneven surfaces can interfere with your ability to handle the wheelchair safely.
If the wheelchair moves in a way that you do not want, **RELEASE THE JOYSTICK!** This always makes the wheelchair interrupt the current movement.

Driving rules

Support wheels

Your wheelchair may be fitted with front support wheels to reduce the risk of tipping when driving over obstacles, etc. They must always be fitted when you drive.

⚠ WARNING!

If your wheelchair is fitted with support wheels, they must always be fitted when you drive. There is a risk of tipping.
Always be aware that high speed and a longer braking distance mean a greater risk of accident. Never drive fast/at full speed in narrow passages, on narrow pavements, etc. because an incorrect maneuver/steering error can lead to a risk of accident.
Remember that a surface that is closed at the side will affect the wheelchair and may make it steer sideways. Therefore, never drive at full speed on surfaces that are closed at the side.
Using the seat angle function shifts the center of gravity, which may have a negative effect on the driving properties. So never drive at full speed if the seat has been angled a long way.

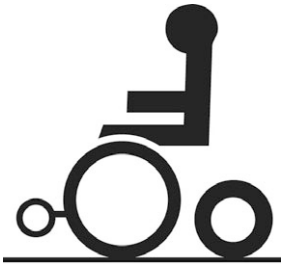

Figure 111. Support Wheels

Driving over obstacles

Do not drive the wheelchair over obstacles higher than 100 mm. If you drive over higher edges, there is a higher risk of tipping and of damage to the wheelchair.

You should always drive over obstacles with great caution. Always approach the obstacle perpendicular.

⚠ WARNING!

Do not drive the wheelchair over obstacles higher than 100 mm. You should always drive over obstacles with great caution.
A raised seat lift/seat angle/back angle changes the centre of gravity and increases the risk of tipping. Therefore, use these seat functions only on flat surfaces and always drive with great caution and at low speed.

Figure 112. Driving over obstacles.

Driving on side slopes

You should always drive on side slopes with great caution.

Avoid sudden evasive maneuvers and never drive so fast that you are unable to control the wheelchair safely without risks.

You should be extremely careful when driving on side slopes with an uneven surface (for example grass, gravel, sand, ice and snow).

⚠ WARNING!

Do not drive the wheelchair on side slopes steeper than 9°. There is a risk of tipping.
A raised seat lift/seat angle/back angle changes the centre of gravity and increases the risk of tipping. Therefore, use these seat functions only on flat surfaces and always drive with great caution and at low speed.

Figure 113. Driving on side slopes.

Driving downhill

You should always drive downhill at low speed and with great caution.

Avoid braking suddenly and sudden evasive maneuvers and never drive so fast that you are unable to control the wheelchair safely without risks.

You should be extremely careful when driving downhill on an uneven surface (for example grass, gravel, sand, ice and snow).

⚠ WARNING!

Do not drive downhill on a gradient greater than 12°. Dynamic stability according to ISO 7176-2 = 6°.
A raised seat lift/seat angle/back angle changes the center of gravity and increases the risk of tipping. Therefore, use these seat functions only on flat surfaces and always drive with great caution and at low speed.

Figure 114. Driving downhill.

Driving uphill

You should always drive uphill with great caution.

Avoid sudden evasive maneuvers and never drive so fast that you are unable to control the wheelchair safely without risks.

You should be extremely careful when driving uphill on an uneven surface (for example grass, gravel, sand, ice and snow).

⚠ WARNING!

Do not drive uphill on a gradient greater than 12°. Dynamic stability according to ISO 7176-2 = 6°.
A raised seat lift/seat angle/back angle changes the center of gravity and increases the risk of tipping. Therefore, use these seat functions only on flat surfaces and always drive with great caution and at low speed.

Figure 115. Driving uphill.

Manual Release of the Magnetic Wheel Locks

The wheelchair is fitted with a manual brake release on each drive wheel that can be released to make it possible to move the wheelchair manually. The brake release levers are located at the front of the wheelchair.

Release of wheel locks

1. Shut off the wheelchair using the start button on the control panel.
2. Move the levers downwards to release the brakes. The chair can know be moved manually.

Engage the wheel locks

Move the lever upwards so it assumes in its upper most position. Always check that the release levers goes right to its most upper position.

⚠ WARNING!

Do not engage or disengage the wheel locks unless power to the chair is off.
In order to avoid the wheelchair rolling away, ensure that the wheelchair is on a level surface before releasing the wheel locks.
Be aware that the wheelchair will not have brakes when the wheel locks are in free-wheel position.
Make sure that the person pushing the chair has full control when the wheel locks are disengaged.
Always reset the wheel lock release after manually moving the wheelchair.

⚠ CAUTION!

When the wheel locks are released, the chair will not drive. If it does, contact an Authorized Permobil service center as soon as possible.

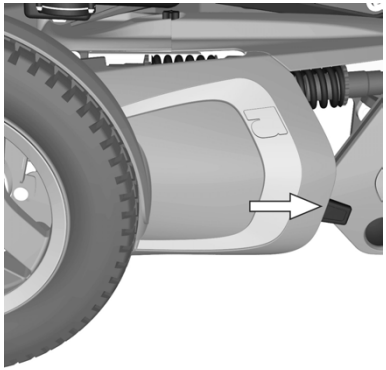

Figure 116. Location of the release levers.

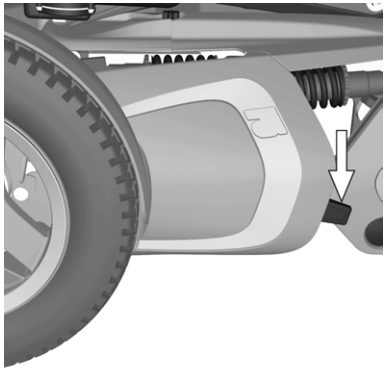

Figure 117. Wheel lock released.

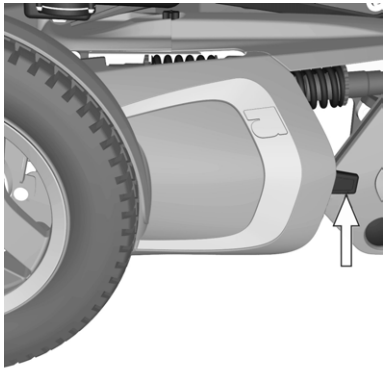

Figure 118. Wheel lock engaged.

Charging batteries

When should the batteries be charged?

How frequently you need to charge the batteries in your wheelchair depends on a number of factors, including how you use your wheelchair, the temperature and age of the batteries and how they are made. All batteries also gradually lose capacity as they age.

The most important factor for the life of the batteries is how much power is taken out of them before they are charged and how often they are charged/discharged.

⚠ CAUTION!

If the batteries should be drained completely, it is important that you charge them up again as soon as possible since a complete loss of charge reduces the life span of the batteries.

To achieve the best life, the batteries should not be discharged completely. Always charge the batteries immediately after they have been discharged.

If the battery voltage indicator shows that the batteries appear to be losing power faster than normal, the batteries may be worn out and need to be replaced.

Charging

Ensure that the wheelchair is switched off with the On/Off key on the control panel and then connect the charging plug to the charging socket. The battery voltage indicator on the wheelchair's control panel lights up and shows the charging status during charging.

After charging has been completed, the wheelchair must be switched off and on again with the On/Off key on the control panel before it can be driven.

NOTE!
Description and Use of Battery Charger, see supplied Owner´s Manual.

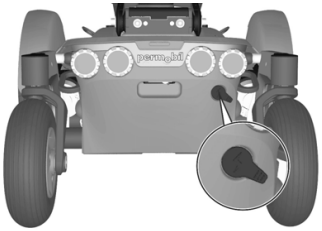

Figure 119. Charging socket.

⚠ WARNING!

Use only the charger supplied with your wheelchair or recommended by Permobil. Using other chargers may damage the batteries, the wheelchair electronics or the charger itself. It may also result in parts becoming overheated, which may entail a greater risk of fire.
Be careful when using metal objects when working with batteries. A short-circuit can easily cause an explosion. Always use safety gloves and safety goggles.
You may only use a charger with a maximum charging current of 10 A (average) (the effective value of the charging current must not exceed 12 A). The batteries must be charged in a well-ventilated room, not in a wardrobe. The batteries must not be charged in a bathroom or wetroom.

⚠ WARNING!

If you want to interrupt the charging process, the mains voltage should be switched off before the charging contact is disconnected from the wheelchair’s charging socket. This is to avoid sparking and unnecessarily high wear on the charging contact.
The charger may get hot and must not be covered. The charger must be placed so that it has free space on all sides.
The charging contact must be replaced if it is damaged or gets hot during charging. Both the contact on the charger’s cable and the wheelchair’s charging socket should be replaced if one part is damaged or worn. The contacts must be replaced by qualified personnel.

⚠ CAUTION!

The charger’s charging cable must not be extended.
Carefully read the instructions supplied with the charger before starting to charge the wheelchair.
Switch off the wheelchair with the On/Off key on the control panel before charging but ensure that the main fuse is in the ON position.
Ensure that the charging contact has been fully inserted in the wheelchair’s charging socket.
The wheelchair cannot be driven when the charger is connected.

TRANSPORT

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General

The wheelchair must only be transported in a vehicle that is approved for such purposes.

Check that the wheelchair is properly fastened and that the wheel locks are engaged. When transporting the wheelchair in a vehicle, the wheelchair must be locked into position by running fastening straps through the transport eyes at the front and rear, marked with yellow stickers.

Secure the wheelchair according to the manuafacturer of the vehicle restraint systems instructions. Always make sure that the fastening points on the transport vehicle are well-anchored.

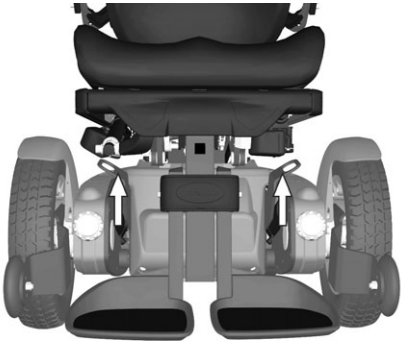

Figure 120. Front transport eyes.

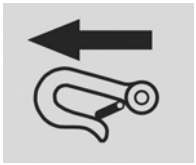

Figure 121. Sticker for transport eyes.

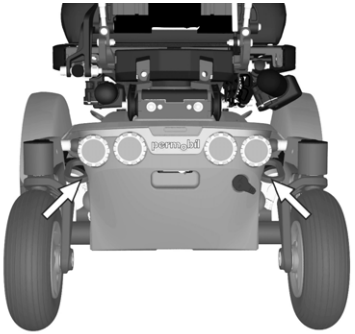

Figure 122. Rear transport eyes.

⚠ WARNING!

Transport
The wheelchair must only be transported in vehicles approved for this purpose. Always ask for confirmation of the transporter that the vehicle is suitable designed, insured and equipped to transport a person in a wheelchair. A wheelchair is not designed as a car seat and cannot offer the same degree of safety that is offered by standard car seats, no matter how securely it has been fastened in the vehicle concerned.
Carefully check that the wheelchair is properly fixed and that the break release has not been activated (the wheelchair drive wheels must be locked). The wheelchair must only be locked into position with loading straps from the tie-down points at the front and rear, marked with yellow stickers, or by using a Permolock locking system. The wheelchair must not be secured onto any other part of the wheelchair including the seat.
If the wheelchair needs to be transported with the user seated in it, be sure to use an approved attachment system suitable for the total weight of the wheelchair to secure the wheelchair.

- Permobil recommends that the wheelchair be equipped with a headrest and that this is used during transportation.
- During transportation, it is essential that you are secured with a three-point safety belt that is attached to the floor and a side of the vehicle.
- Permobil positioning belts are designed to position the user only and not to protect you in the event of a motor vehicle accident. The positioning belts do not replace use of a vehicle mounted restraint.

Removing the backrest

To make transportation of the wheelchair easier, the back can be removed in a few simple moves.

1. Remove the back rest cushion. It is fixed in place by means of Velcro on the rear of the cushion.
2. Remove the upper section of the back rest by carefully undoing the clip on the rear of the back rest and pulling the upper section straight up at the same time. See fig.

If necessary, the head rest can also be removed - see page 35.

Figure 123. The upper section of the back rest is secured with a locking mechanism.

General advice for air transport

When transporting your wheelchair by air, you should primarily pay attention to the following three things:

1. Batteries

Gel batteries: In most cases, they do not need to be removed from the wheelchair.

The main fuse must always be in the Off position.

Acid batteries: Most airlines require that batteries be removed from the wheelchair and transported in special boxes that the airline may provide.

⚠ CAUTION!

If you do not know what type of main fuse your wheelchair has, contact Permobil or your service contact. Some airlines may refuse to accept acid batteries on board.
To ensure that the wheelchair can be transported safely and no nasty surprises crop up at the last minute, you should always contact the airline before you travel.

2. The wheelchair´s dimensions and weight

How much the wheelchair weighs and how large it is are important, depending on the type of airplane in which the wheelchair is to be transported. The smaller the airplane is, the smaller the wheelchair may be/weigh and vice versa. Always check with the airline what rules apply.

3. Preventing damage

When transported by air, the wheelchair will be put with other goods in a confined space. Therefore, it is important to take preventive action to minimise transport damage to the wheelchair.

Cover the control panel with soft, shock-absorbing material (foam plastic or similar) and fold it in towards the back rest. Protect other protruding objects in a similar manner. Tape any loose cables to the seat or covers.

MAINTENANCE AND REPAIRS

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Toolbag

The wheelchair comes with a toolbag with the following contents that can be used for maintenance and minor repairs.

TOOL	AREA OF USE
Allen keys	General maintenance/seat adjustment
11, 13 mm spanners	General maintenance/replacing batteries
Seat lift crank	Manually raising the seat lift
Security key	Locking/unlocking the wheelchair

Frequency of maintenance and inspection

Permobil recommends that the following maintenance and inspection schedule is followed. For all service related needs or questions turn to your authorized Permobil dealer.

Maintenance and Inspection Schedule	Daily	Weekly	Monthly	Yearly
Check battery level indicator and charge if necessary.	●			
Check that the joystick panel is not damaged.	●			
Ensure all removable parts are securely locked in place.	●			
Check belt for wear and make sure the buckle is operational.	●			
Check tires and inflate if necessary.		●		
Ensure lights and indicators are operational and clean.		●		
Clean wheelchair and upholstery.			●	
Check upholstery, seating, headrest, armpads and calfpads for wear.			●	
Check that the brake release and the brake release lever are working properly.			●	
Complete inspection, safety check and service should be performed by an authorized Permobil dealer.				●

General

To ensure that your wheelchair works well, it is important for it to be used correctly and regularly maintained. A well maintained wheelchair lasts longer and has a lower risk of faults.

⚠ WARNING!

Any unauthorized alterations to the wheelchair and its systems may lead to an increased risk of accident.
All alterations to and interventions in the wheelchair's vital systems must be performed by a competent service engineer. In case of doubt, always contact a competent service engineer.

⚠ CAUTION!

Some repairs may require tools other than those supplied with the wheelchair.
The main fuse must always be switched off when batteries and fuses are replaced. Always switch off the power supply to the control panel before interrupting the power with the main fuse.

General - batteries/storage

⚠ WARNING!

Any unauthorized alterations to the wheelchair and its systems may lead to an increased risk of accident.
All alterations to and interventions in the wheelchair's vital systems must be performed by a competent service engineer. In case of doubt, always contact a competent service engineer.

- Please note that a battery discharges itself and that a discharged battery can burst when it is cold. If the wheelchair is to be stored unused for an extended period of time, the batteries must always be charged once a month to avoid them being damaged.
- The wheelchair must not be stored in areas subject to condensation (steam or moisture on surfaces), for example utility rooms or similar.
- The wheelchair may be stored in an unheated room. From the point of view of corrosion, it is best for the room to be a few degrees warmer than the surroundings as this keeps the room drier.
- If the wheelchair is fitted with acid batteries, the acid level should be checked regularly. If the wheelchair is fitted with gel batteries, the liquid level does not need to be checked.
- The life of the batteries depends entirely on regular charging.

Short-term storage

For the charging process to produce a battery with good capacity, the temperature in the storage room should not be lower than +5 degrees. If it is stored at a temperature below +5 degrees, there is a higher risk that the battery has not been fully charged when it comes to be used and also a higher risk of corrosion.

Long-term storage

The battery may be stored in an unheated room but it should be charged at least once a month for maintenance purposes.

Cleaning

Regular care and maintenance will prevent unnecessary wear and damage to your wheelchair. The following is general advice recommended by Permobil. For severe soiling of the upholstery or damage to the surface finish, contact Permobil for information.

Metal surfaces

For normal cleaning it is best to use a soft cloth/sponge, hot water and a mild detergent. Wipe down carefully with a cloth and water, and dry off.

Remove scuff marks from semi-matt surfaces with soft wax (follow manufacturer's instructions).

Remove scuff marks and scratches from shiny surfaces using car polish, either liquid or paste. After polishing, apply soft car wax to restore the original surface gloss.

Plastics

For normal cleaning, wash plastic surfaces with a soft cloth, mild detergent and hot water. Rinse thoroughly and dry with a soft cloth. Do not use solvents or abrasive kitchen cleaners.

Upholstery, cloth/vinyl

For normal cleaning, wash the upholstery with lukewarm water and a mild non-abrasive soap. Use a soft cloth or brush. Before the surface dries, wipe off any water/soap residues with a clean, dry cloth. This procedure may be repeated to remove stubborn dirt or stains. Ink spots can sometimes be removed by washing with soap and water followed by isopropyl alcohol.

Do not use any cleaning method that is not listed above, as other methods may attack the vinyl and cause eventual degradation.

If necessary, the cover may be removed before cleaning. See also the washing instructions on the upholstery materials.

Control panel

Use a soft cloth moistened with mild detergent and be careful when cleaning the joystick and the panel's display. Do not use solvents or abrasive kitchen cleaners. The panel must not be rinsed with water or any other liquid.

⚠ WARNING!

Never hose the wheelchair down as the electronics may be damaged. The wheelchair must always be turned off when being cleaned.

Positioning belt

Check the condition of the positioning belt regularly in case any damage or worn places have developed. If signs of damage or wear appear, replace the positioning belt immediately through your Permobil dealer.

Brake release

Check regularly, approximately once a month, that the brake release and the brake release lever are working properly.

When the brakes are released, it should not be possible to drive the wheelchair.

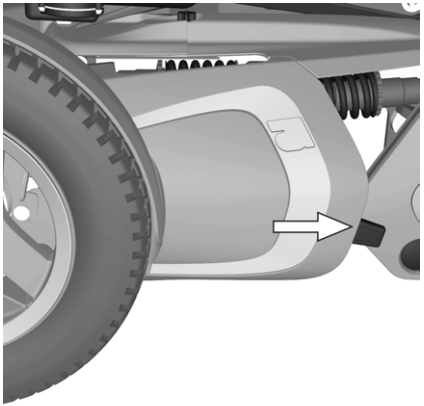

Figure 124. Brake release lever

Drive wheels

Filling tires with air

Check at regular intervals that the wheelchair's tires have the correct tire pressure. The incorrect tire pressure may result in lower stability and maneuverability. Too low tire pressure also results in abnormal wear and shorter range. Therefore, check regularly that the tire pressure is 200-250 kPa (2-2.5 bar).

1. Unscrew and remove the plastic cap on the valve on the tire.
2. Connect the compressed air nozzle to the valve and adjust the tire pressure to the correct level.

Figure 125. Filling valve.

Changing inner tube

NOTE!
Applies only if your wheelchair is fitted with pneumatic rear tires.

1. Switch off the main power switch on the control panel
2. Chock up the wheelchair so that the wheel turns freely and let out the air.
3. Remove the wheel, it´s fitted with four screws.
4. Release the air.
5. remove the six screws holding the rim together.
6. Take the rim apart.
7. Replace the inner tube (2) in the tire (3) and fit together with the two rim halves (1&4). Tighten the six screws using a dynamometric wrench. **Tightening torque: 24 Nm.**
8. Fill the tire to recommended tire pressure, 200 kpa (2 bar).
9. Fit the wheel on to the wheelchair. Tighten the four screws using a dynamometric wrench. **Tightening torque: 24 Nm**.

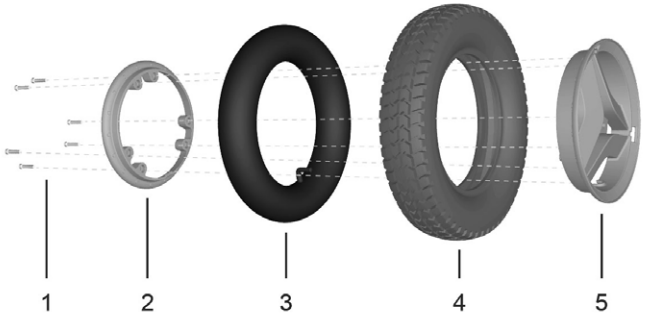

Figure 126. Changing inner tube.

Pivot wheels

Filling tires with air

NOTE!
Applies only if your wheelchair is fitted with pneumatic tires.

Check at regular intervals that the wheelchair's tires have the correct tire pressure. The incorrect tire pressure may result in lower stability and maneuverability. Too low tire pressure also results in abnormal wear and shorter range. Therefore, check regularly that the tire pressure is 200-250 kPa (2-2.5 bar).

1. Unscrew and remove the plastic cap on the valve on the tire.
2. Connect the compressed air nozzle to the valve and adjust the tire pressure to the correct level.

Figure 127. Filling valve.

Inner tube replacement

NOTE!
Applies only if your wheelchair is fitted with pneumatic rear tires.

1. Chock up the wheelchair so that the wheel turns freely and let out the air.
2. Take the wheel rim apart by unscrewing the three Allen screws (6)that hold it together.
3. Replace the inner tube (4).
4. Put the wheel rim together with the tire. Check that the inner tube is not caught between the halves of the wheel rim. Fill the tire with air.

⚠ WARNING!

The recommended tire pressure for front and rear tyres is 200-250 kPa (2-2.5 bar). Overfilling entails a risk of explosion.
The incorrect tire pressure may result in lower stability and maneuverability. So check regularly that the tires have the correct pressure.

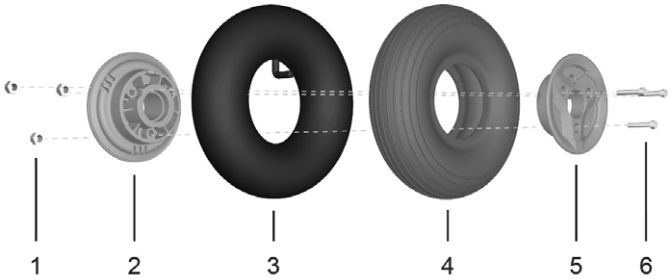

Figure 128. Inner tube replacement.

Battery replacement

Removal of the batteries

1. Place the wheelchair on a level surface and raise the seat lift.
2. Switch off the power supply using the ON/OFF key on the control panel and switch the main fuse to Off.
3. Remove the two knobs holding the chassis covers. See fig. 130.

Figure 129. Main fuse.

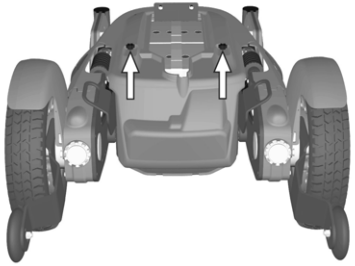

Figure 130. The chassis covers are secured with two knobs.

4. Lift/pull the top- and rear chassis covers off the chassis. See fig. 131 and 132.

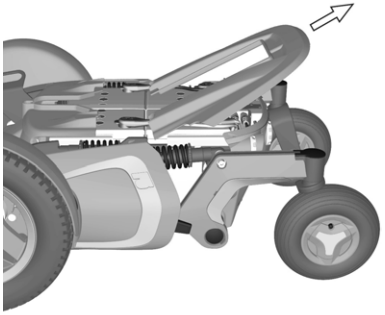

Figure 131. The chassis top cover.

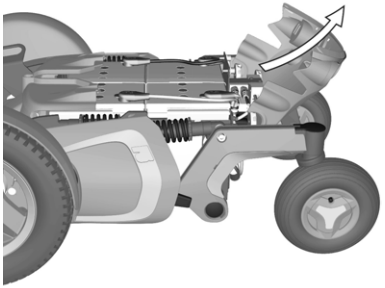

Figure 132. The chassis rear cover.

5. Remove the four screws holding the battery box. See fig. 133.
6. Use the straps to pull the battery box out of the chassis. See fig. 134.
7. Loosen the battery connections.

⚠ WARNING!

Be careful when using metal objects when working with batteries. A short-circuit can easily cause an explosion. Always use safety gloves and safety goggles.
Remember that the batteries are heavy and must be handled with great caution.

8. Lift the batteries out of the battery box using the battery straps.

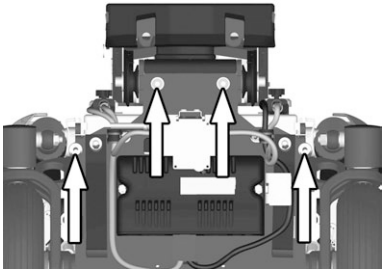

Figure 133. The battery box is secured with four screws.

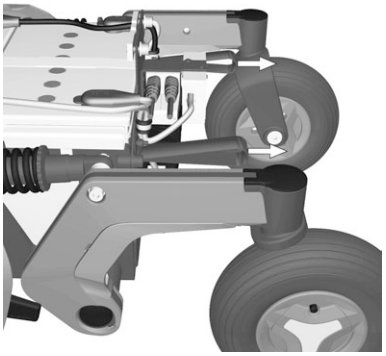

Figure 134. Use the straps to pull the battery box out of the chassis.

Fitting of the batteries

1. Use battery straps and lift new batteries in reverse order (leave the straps on the new batteries). Connect the battery connections.

   NOTE!
   Also see the sticker on the inside of the chassis covers

2. Push the battery box in to the chassis.
3. Refit the four screws holding the battery box. See fig. 133.
4. Refit the chassis covers on to the chassis. See fig. 131 and 132.
   Refit the two knobs. See fig. 130.
5. Switch the main fuse to On.

⚠ CAUTION!

Used or malfunctioning batteries should be disposed of responsibly in accordance with local recycling regulations.

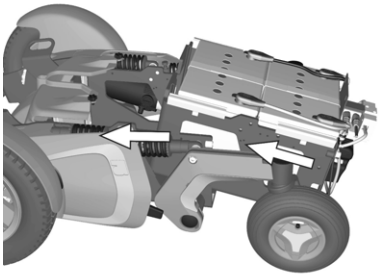

Figure 135. The batteries and their connectors.

Figure 136. Main fuse.

Resetting the main fuse/battery isolator

The main fuse also functions as a battery isolator but it is called the main fuse in the owner´s manual.

It is not normally necessary to replace the main fuse as it is automatic and can be reset when it has been triggered. It is reset by switching the switch to ON.

Figure 137. Main fuse.

⚠ WARNING!

If the main fuse is triggered, there is often a major electrical fault. The cause of the fault should be checked carefully before the switch is reset. Contact Service in case of doubt.

⚠ CAUTION!

Always switch off the power supply to the control panel before interrupting the power with the main fuse.

ACCESSORIES

Accessories for Permobil power wheelchairs are subject to continuous development. Contact your nearest Permobil dealer for more information on the accessories available for your wheelchair.

TECHNICAL SPECIFICATIONS

Length 1140 mm.
Height 1095 - 1170 mm mm.

Width 655 - 790 mm.

Smallest transportation size
Length 825 - 930 mm.
Width 655 - 790 mm.
Height 825 mm.

TECHNICAL SPECIFICATIONS

General	
Product name	F5 Corpus
Wheelchair class	B

Dimensions and weight	
Length	1140 mm
Width	655 - 790 mm
Height	1095 - 1170 mm
Minimum transport length	825 - 930 mm.
Minimum transport height	825 mm.
Minimum transport width	655 - 790 mm
Weight, incl. batteries	186 Kg.
Seat plane angle	0°
Effective seat depth	370 - 570 mm
Effective seat width	420 - 570 mm
Seat surface height at front edge	450 - 800 mm.
Back rest angle	120° (manual) 150° & 180° (power)
Back rest height	470 - 670 mm
Footrest to seat distance	465 mm.
Leg to seat surface angle	90°– 180°
Armrest to seat distance	185 – 320 mm.
Front location of armrest structure	0 – 435 mm.

TECHNICAL SPECIFICATIONS

Wheels	
Drive wheel tire dimensions	3.00” x 8”
Pivot wheel tire dimensions	210 x 65 mm.
Rec. tire pressure	200 kPa (2-2.5 bar)
Performance	
Range	25–35 km.
Min. turning diameter	1525 mm
Reversing width	1140 mm.
Ability to Negoatiate Obstacles (approcah distance 0 cm)	70 mm.
Ability to Negoatiate Obstacles (approcah distance 50 cm)	100 mm.
Min. ground clearence	76 mm.
Hill-climbing ability	12°
Safe slope	6°
Sideways Slope Capability	9°
Static stability downhill	17°
Static stability uphill	13°
Static stability sideways	14°
Max. Speed forward	12 km/h
Min. braking distance from max. speed.	2,8 m.
Max. User weight	150 Kg.

TECHNICAL SPECIFICATIONS

Electronics	
Rnet drive electronics type	JSM-L-SV / PM120
Batteries	
Recommended battery type	24 cells, gel
Battery capacity	2x73Ah
Charging time	8 hours
Weight	17,5 Kg.
Fuses	
Main fuse	63 A
Control force	
Joystick	1,5 N
Keys	2 N

TROUBLESHOOTING

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Troubleshooting guide

The following troubleshooting guide describes a number of faults and events which may occur when you use your wheelchair, together with suggested remedies. Note that this guide cannot describe all the problems and events which may occur and you should always contact your service contact or Permobil in case of doubt.

EVENT	POSSIBLE CAUSE	REMEDY
The wheelchair cannot be started.	Batteries discharged.	Charge the batteries.
	The cable connection to the control panel has come loose.	Insert the cable in the control panel.
	Main fuse switched to OFF position after, for example, battery replacement.	Reset the main fuse. See page 153.
	Main fuse triggered.	See page 153.
The wheelchair cannot be driven.	Battery charger connected.	Stop charging and disconnect the charging cable from the wheelchair’s charging socket.
	Brake release activated.	Reset the brake release.
	Wheelchair locked with the security key.	Unlock the wheelchair. See page 153.
The wheelchair ”switches itself off” after a certain period of inactivity (20-30 min.).	The electronics’ energysaving mode has been activated.	Switch the wheelchair on again using the start key on the control panel.
The wheelchair stops while being driven.	The cable connection to the control panel has come loose.	Insert the cable in the control panel.
	Main fuse triggered.	See page 153.
The wheelchair can only be driven at reduced speed. (Applies with an electric seat lift and seat angle.)	Seat lift or seat angle raised too high.	Lower the seat lift or seat angle.

EVENT	POSSIBLE CAUSE	REMEDY
The wheelchair cannot be charged.	Main fuse switched to OFF position after, for example, battery replacement.	See page 153.
	The charging fuse is triggered	Wait for five minutes, the fuse will be automatically reset.

Diagnostics Rnet LED

Battery voltage indicator

Each time the wheelchair is started, parts of the wheelchair´s electronics are checked. If any fault has occurred in these parts, this is displayed on the control panel´s battery voltage indicator and the indicator for speed/driving profile in the form of one or more flashing lamps.

Troubleshooting and repairs must always be performed by competent personel with good knowledge of the wheelchair´s electronics. More information on troubleshooting and remedies can be found in the Service Manual for this wheelchair model.

⚠ CAUTION!

Any error signals on the indicators are not displayed while the wheelchair is being driven. They appear when it is next started.
If any part is replaced without Permobil's approval, the wheelchair's warranty lapses. Permobil accepts no liability for any loss that occurs as a a result of a component of the R-net control system being opened, adjusted or modified without permission.

Permanently on

Everything is in order. The number of lamps that light up depends on the voltage remaining in the batteries. If the batteries are fully charged, all the lamps light up.

Slowly flashing red lamps, 1–2 lamps

The batteries need to be charged immediately.

Rapid flashing, 1–10 lamps

A fault has been detected in the wheelchair´s electronics and the wheelchair can not be driven.

- Switch of the wheelchair.
- Check that all visible cables and the cable to the control panel are connected correctly.
- Switch the wheelchair on again. If the fault persists, count the number of flashing lamps and check for a possible cause and remedy in the table on the adjoining page.
- Do not use the wheelchair until the problem has been remedied or you have received other information from your service contact.

⚠ WARNING!

Diagnostics should only be performed by persons with sound knowledge of the wheelchair’s electronic control system. Incorrect or poorly performed repair works may make it dangerous to use the wheelchair. Permobil accepts no liability for any personal injury or damage to the wheelchair and its surroundings that occurs on account of incorrect or poorly performed repair work.

Example of error messages and remedies

EXAMPLE OF ERROR MESSAGES AND REMEDIES	
	1 Lamp — Low battery voltage Check the condition of the batteris. Check the contact between the battery and the control unit.
	2 Lamps — Failure in left drive motor Check the connection of the left drive motor.
	3 Lamps — Short-circuit in left drive motor Check the left drive motor’s contacts and cables.
	4 Lamps — Failure in right drive motor Check the connection of the right drive motor.
	5 Lamps — Short-circuit inright drive motor Check the right drive motor´s contacts and cables.
	6 Lamps — Battery charger connected Disconnect the battery charger.
	7 Lamps — Joystick error Check that the joystick has not been moved when the wheelchair is started.

EXAMPLE OF ERROR MESSAGES AND REMEDIES	
	8 Lamps — Control system error Check the contacts to the output stage.
	9 Lamps — Failure in brake circuit Check the contacts to the magnetic brakes.
	10 Lamps — High battery voltage Check the battery and the contacts between the battery and the output stage.
	7+5 Lamps — Communication error A communication error has been indicated. Check that the cable to the control panel is not damaged and is correctly inserted.
	Actuator indicator — Actuator error An actuator error has been indicated. If the wheelchair is fitted with more then one actuator, check which one is not working. Check the actuator´s cable connections.

Diagnostics R-net LCD

When an error or a fault occurs in the wheelchair's electronics, information on it is displayed in the control panel's display. This information can then be used to diagnose where the error/fault occurred and its cause.

Troubleshooting and repairs must always be performed by competent personnel with good knowledge of the wheelchair's electronics. More information on troubleshooting and remedies can be found in the Service Manual for this wheelchair model.

Diagnostic screens

Current diagnostic screen

When the control system's integrated protection circuits have been triggered so that the control system can no longer operate the wheelchair, a diagnostic screen is displayed in the control panel's display.

This indicates a system fault, i.e. R-net has detected a problem somewhere in the wheelchair's electrical system.

NOTE!
If the fault is in a module that is not currently being used, it may still be possible to drive the wheelchair, but the diagnostic screen is displayed occasionally.

Switch off the wheelchair and leave it off for a few minutes. Then restart the wheelchair. If the fault persists, you must switch off the wheelchair and contact your service contact. Write down the information displayed in plain text in the control panel's display and pass it on to your service contact.

Do not use the wheelchair until the problem has been remedied or you have received other instructions from your service contact.

⚠ WARNING!

Diagnostics should only be performed by persons with sound knowledge of the wheelchair's electronic control system. Incorrect or poorly performed repair works may make it dangerous to use the wheelchair. Permobil accepts no liability for any personal injury or damage to the wheelchair and its surroundings that occurs on account of incorrect or poorly performed repair work.

⚠ CAUTION!

If any part is replaced without Permobil's approval, the wheelchair's warranty lapses. Permobil accepts no liability for any loss that occurs as a a result of a component of the R-net control system being opened, adjusted or modified without permission.

Example of a screen showing a system fault

Identified module

This indicates the control system module that detected the problem.

PM= Power module

JSM= Joystick module

Error message

The error message provides a brief description of the error type.

Error code

The four-digit code indicates which protection circuit has been triggered.

Repair of defective units

Apart from specific OEM-approved spare parts (contact Permobil for further information on these), there are no replaceable parts in the R-net control system. Consequently, defective units must be sent to Permobil or a Permobil-approved repairer for repair.

STICKERS

Take a good look at all the stickers on your wheelchair to become familiar with their meaning. These stickers contains important information for safe and proper use.

Never remove a sticker from your wheelchair. If a sticker becomes difficult to read or falls off, new replacement stickers may be ordered from Permobil.

Read the instructions

The sticker indicates that there are instructions that should be read and understood before use or before adjustment is performed.

Figure 139. Read the instructions.

Main fuse/Battery Isolator

The sticker shows in what position the switch should be to turn the main power Off respectively On.

Description of the main fuses function is found on page 90.

Figure 140. Main fuse/Battery Isolater.

Wheel Locks

The sticker shows the wheel lock release levers position, in released respectively activated state.

Description of the wheel locks function is found on page 73.

Figure 141. Wheel Locks.

Tie-down point

The sticker indicates where the wheelchair must be secured during transport. There is a sticker next to each tie-down point.

Description of transport of the wheelchair is found on page 76.

Figure 142. Tie-down point

Support wheels

The sticker indicates that your wheelchair is fitted with support wheels to reduce the risk of tipping when driving over obstacles, etc. They must always be fitted when you drive.

Figure 143. The support wheels must always be fitted when you drive.

Crushing Hazard

The sticker indicates Crushing Hazard.

Figure 144. Crushing Hazard.

Warning

The sticker indicates that special attention is required.

Use extreme caution where this warning symbol appears. Failure to observe warnings can lead to personal injury and property damage, including damage to the wheelchair.

Figure 145. Warning, special attention is required.

Battery Connections and Fuses

The sticker shows the polarity of the batteries and where the fuses are found on the wheelchair.

Description of changing batteries is found on page 149.

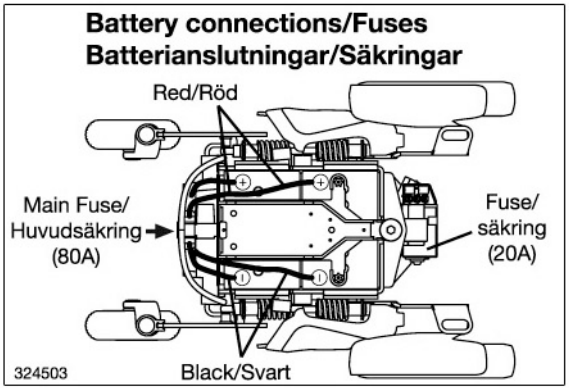

Figure 146. Battery Connections and Fuses.

Serial number label

1. Made in (country of final assembly) by (adress of site of final assembly)
2. Serial number
3. Product type
4. Date of assembly
5. EAN code
6. Maximum user weight

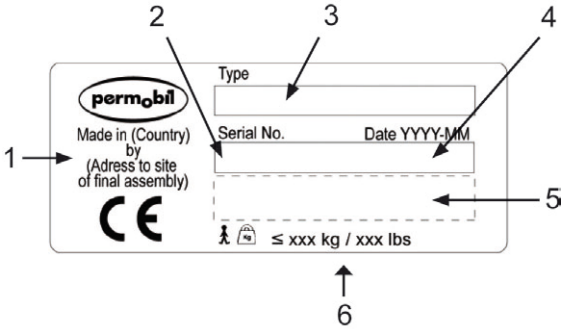

Figure 147. Serial number label.

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